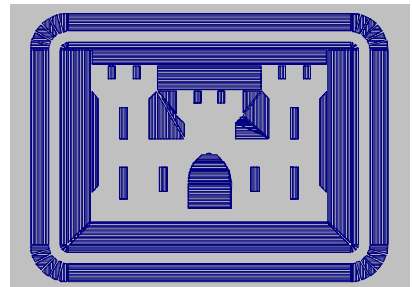


# **EPA/USACE SUPERFUND PROGRAM**

## ***Senior Management Review (SMR) Meeting Notes***

*January 20, 1999*



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*730-1630*

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# **EPA/USACE SUPERFUND PROGRAM**

## ***Senior Management Review (SMR) Meeting Notes***

*January 20, 1999  
0730-1630*

### **Welcome and Introductions**

James Waddell began by asking the attendees to stand and introduce themselves. The list of attendees for the SMR meeting is provided in Appendix 2.

Bill Zobel explained the five rules of conduct for the meeting:

1. Every contribution has value.
2. Speak one at a time.
3. Stick to time limits.
4. Willingly raise concerns.
5. Willingly volunteer.

Larry Reed of EPA prefaced his report on the Superfund status and programs by noting that neither Superfund nor Reauthorization was addressed in the President's State of the Union Address. The future of the Superfund program is unclear, although potential compromises in the comprehensiveness of the legislation may extend authority. In addition, the trust fund will be exhausted some time in 2001.

Currently, EPA Headquarters is conducting monthly conference calls with the USACE to identify commonalities and overlapping issues. Mr. Reed mentioned that the meeting materials outline many of these issues. Examples of opportunities for cooperation between EPA and the USACE are through the Centers of Expertise (CX), cost estimating reviews, and Y2K compliance issues at cleanup sites.

Some of the major programmatic issues that face the agencies are reuse of Superfund sites, Base Realignment and Closure (BRAC), Brownfields, and Formally Utilized Sites Remedial Action Program (FUSRAP). Contaminated sediments also are becoming a topic of intense national and political interest and could be best addressed with cooperation from the USACE. The Hudson River and Housatonic sediment sites are examples of USACE and EPA cooperative efforts that address contaminated sediment remediation strategies, scoring, and Superfund cleanup responsibilities.

LTC Jeff Hills of USACE, then addressed the group and stated he was looking forward to the demonstration of the RECAP remote monitoring system used at the Industrial Latex site in New Jersey. LTC Hills praised the use of the business manager in Region 2. He also pointed out that



operating as a business ensured that the best abilities and costs are taken into account when coordinating USACE resources with EPA needs.

LTC Hills also felt that recycling of Superfund sites is an opportunity for USACE involvement. The presentation by Civil Works representatives will provide more information on this topic. USACE may also provide assistance in testing and resolving Y2K compliance issues at Superfund sites.

### **Superfund Program Status/Update**

John Smith reported that initiatives begun in fiscal year 1995 emphasized fast tracking and increased use of removal authority at Superfund sites. In the same year, Congress withheld \$100 million and threatened further cuts. EPA began ranking sites and funding cleanup according to their priority. As time progressed, EPA realized that this was a short-sighted response because it increased the time that sites must spend on the NPL.

Mr. Smith recommended that management of EPA programs be proactive and strive to address potential problems more quickly. The current annual budget for the Superfund Program remains as \$1.5 billion annually. Removal and enforcement funding for 1996, 1997, and 1998 was \$560, \$670, and \$540 million, respectively. Funding for the next three years is expected to be fairly consistent:

- C Ongoing projects: \$200-250 million/year
- C Removal projects: \$120 million/year
- C Enforcement/Fairness: \$30-60 million/year
- C Remaining new start construction: \$150 million/year

Last year, 27 new remedial action projects were started, 9 of which were remedial and 2 were removal. These new starts cost \$210 million. Mr. Smith also stated that a more detailed breakdown of these costs and an analysis of trends will be available at the next SMR meeting. In response to Shaheer Alvi, Mr. Smith reported that there appear to be geographic funding trends that will be addressed at the next SMR meeting.

Mr. Smith also reported that there are many dynamics existing that affect the Superfund workload. The easiest, smallest site cleanups were completed first. Current projects, therefore, tend to be larger more complex sites and face heightened community involvement.

The Superfund program will probably become more involved with Brownfields and equivalent cleanup activity. Equivalent cleanup activity is used to remediate sites that are not listed on the NPL. This strategy depends on coordination and cooperation from the PRPs for cleanup to be effective.

## Sound Bytes

James Waddell and Ken Skahn provided short status updates to the audience on a number of topics and issues. The intent of the “sound byte” presentation is to provide information deemed important but not requiring extensive presentations or discussion.

### *Technical Assistance to EPA - Chemistry Labs*

Dr. Marcia Davies reminded the group that the USACE environmental labs are located in Vicksburg and Omaha. The Waterways Experiment Station (WES) in Vicksburg, Mississippi, is capable of analyzing a host of samples and has abundant experience with dioxins. The environmental labs provide appropriate government assurance and do not compete with the private sector. The CX can also collect high quality samples, rerun data tapes, or assist with project planning for determining which sampling methods to use. A description of the chemistry laboratories is provided in the meeting materials (Appendix 3).

### *Center of Expertise (CX)*

Ken Skahn discussed the great potential for EPA to use the CX. Partial funding for the CX is provided by an IAG. Tasks accomplished by the CX include cost recovery documentation, management of the national IAG database, and data validation. The CX also conducts technical review of Records of Decision (RODs), cost estimates, and five-year review reports. Mr. Skahn stated that the CX has compiled a notebook of facilities nationwide for commercial treatment, recycling and reuse, and storage. A list of technical experts at the CX is provided in the meeting materials (Appendix 3).

### *Rapid Response Team and Superfund*

James Waddell reported that the Rapid Response Team is represented by John Kirschbaum and has supported the Superfund removal program to dispose of methyl-parathion, coal tar, and other contaminants. In addition to their traditional role in removal actions, the Rapid Response Team also assists with the startup of cost-reimbursement contracts. Mr. Waddell commented that the Rapid Response Team helped to reduce a cost-reimbursement contract of \$1.5 million to \$450 thousand. A description of the Rapid Response Program is provided in the meeting materials (Appendix 3).

### *EPA Remedial Investigation/Feasibility Study (RI/FS) Cost Estimating Guidance*

Ken Skahn reviewed the status of the development of a RI/FS cost estimating guidance by Mike Goldstein of the EPA. Mr. Skahn commented that the document outlines the discount rate and

describes how to compare and support the estimate. The guidance document will address current problems, including the lack of detail and supportability of cost estimates, and will improve the overall ROD cost estimating process. This guidance was developed with the assistance of the cost estimators from the CX.

#### *Formerly Utilized Sites Remedial Action Program*

James Waddell then provided the current status of the FUSRAP program. In 1997, Congress provided \$400 million for the cleanup of FUSRAP sites contaminated with low-level radiation. The transition of these sites from Department of Energy to USACE was relatively successful. Several FUSRAP RODs are currently being developed as part of the program. John Frisco commented that the FUSRAP transition was not entirely smooth. Mr. Waddell agreed, stating that although the process of the transition was good, refinements still need to be made. A description of USACE FUSRAP activities is provided in the meeting materials (Appendix 3).

#### *Y2K Problems*

Mark Keast discussed the process by which Y2K compliance is tested and resolved by the USACE and EPA. The USACE and EPA are responsible for Y2K compliance at the operation and maintenance (O&M) phase of a Superfund site cleanup. Mr. Keast used the Higgins Plant site in Region 2 as an example of a successful Y2K review. Region 2 is using a cost-reimbursement contract and a performance-based statement of work at the site. Testing for Y2K compliance consists of listing the devices used at the site, developing a testing plan, conducting the tests, and then contacting vendors for solutions to Y2K problems. Vendor solutions often include repairing or replacing the defective part, working around the part, or developing a contingency plan. A description of the USACE/EPA Y2K Project is provided in the meeting materials (Appendix 3).

#### **Access to USACE**

##### *Business Managers: Shaheer Alvi and Mike Scarano*

Shaheer Alvi and Mike Scarano reported that the business manager position in Region 2 provided clear technical support and could be implemented in other Regions. Business managers help the EPA by linking Regional needs with USACE resources from all Districts.

Mr. Scarano recommended that business manager positions be filled in more Regions. His success as a business manager depended upon being in constant communication with John Frisco and the RPMs. Fostering honest professional relationships and alliances between agencies created a "virtual team" composed of experienced staff from across the country. Mr. Scarano also pointed out that the business manager focuses on the needs of the EPA and should enjoy political

neutrality within the USACE. The keys to successful implementation of the business management process are flexibility and communication.

*Regional Experience with Generic/Blanket IAGs: William Bolen and Greg Herring*

Generic IAGs are preapproved agreements between EPA and the USACE for smaller short-term work assignments. Technical Assistance IAGs may be used for cost estimating, remedial oversight, document review, real estate support, and Contract Officer Technical Representatives (COTRs) support. Rapid Response IAGs include project planning, site visits, and cleanup activities.

IAGs can be obtained by contacting the Regional Project Officer. A simple two-page Statement of Work is required to detail the task assignments and identify deliverable dates. Ric Hines reminded the group that generic IAGs are funded according to site specific tasks. Mr. Herring also mentioned that Geiners Lagoon, Mid-States Landfill, and NW Muethe are sites where Technical Assistance IAGs were used successfully. A sample generic IAG is provided in the meeting materials (Appendix 3).

*USACE Staff detailed to EPA: John Cunningham*

John Cunningham began by saying that detailing USACE staff to EPA was a “win-win” situation. Going into the process, John Cunningham had questions over the effectiveness of these details and concerns that one year was not sufficient time for USACE staff detailed to a Regional Center to come up to speed. The USACE staff detailed to EPA-HQ quickly dispelled these concerns.

USACE details to EPA-HQ began when John Blanchard successfully implemented an IAG to detail a USACE employee to the EPA Brownfields Program. The success of that individual lead to the consideration of USACE staff details to several of the Superfund’s Program’s Regional Centers at Headquarters. With the first detailee’s assignment nearing the end, plans to find individuals with similar capabilities must be initiated.

Mr. Cunningham also felt that the USACE needs to make EPA details more attractive. Fringe benefits and travel considerations should be improved to compensate candidates for moving away from their families.

*Start-Up Teams: John Kirschbaum*

“Start-Up” Team contributions include cost-reimbursement training in Jacksonville, New York, Kansas, and Nashville. Start-up assistance was also provided in New York, Baltimore, the New England District, and Chicago. Mr. Kirschbaum reiterated the importance of creating “virtual teams” to provide USACE resources from all Districts. Shaheer Alvi commented that ARCS

construction in Region 2 provide another example of USACE involvement. John Frisco also mentioned that EPA in Region 2 had expressed their satisfaction with USACE involvement in cost-reimbursement coordination. Start-up teams have also proven their effectiveness during the closeout process for the Bryant Mill Pond PCB site in Region 5.

## Recycling of Superfund Sites

### *General Background: John Harris and Paul Nadeau*

John Harris is an economist for the Superfund program and has experience with community incentives for reuse of Superfund sites. Mr. Harris pointed out that EPA Administrator Carol Browner will be announcing an initiative to increase reuse of Superfund sites. The successes of the reuse program include:

- C Overcoming the stigma associated with the value of property at Superfund sites,
- C Providing intangible economic benefits to the local community,
- C Maintaining the protectiveness of human health and the environment, and
- C Providing recreational and social benefits.

Mr. Harris stated that reuse involves a holistic approach to site management. Community acceptance and involvement is an important aspect of the planning involved at these sites. Local businesses and lending institutions should be involved in the process and understand the economic potential of reusing the Superfund site. Promotion of the success of recycled Superfund sites will increase their number and foster community acceptance.

There are currently 106 actual and 42 planned recycled Superfund sites. At the Industri-Plex site in Woburn, Massachusetts, Target<sup>®</sup> retail stores purchased the land for \$600,000 per acre. The company was willing to pay a high price for the land because of the sites location near a proposed interstate exchange. Money from the proceeds of the sale went to a private custodial trust used to market the site, and to the landowner, the PRP, and EPA. Target<sup>®</sup> even constructed a cap more protective than what was recommended by EPA as part of a community relations effort.

The Anaconda Smelter site in Montana provides an example of how reusing Superfund sites as golf courses is becoming a growing industry. The PRPs constructed a leachate collection system under the golf course to collect the mining waste. As a bonus, this system also collects and treats the excess fertilizers and other chemicals used to maintain the golf course. PRPs and the EPA at this site worked closely with the community to foster public acceptance.

Casinos are another industry that are reusing Superfund sites. At the Central City/Clear Creek site in Colorado, the RPM was able to convince a local bank to provide the startup costs for the casino. Effective communication between the casino industry, the local community, and the

Regions removed many of the typical obstacles encountered when recycling Superfund sites.

Other successfully reused Superfund sites include the Kane and Lombard site in Baltimore, the Luminous Processes site in Athens, Georgia, the Lipari Landfill site in New Jersey, and the Arkansas City Dump site in Kansas. Mr. Harris attributes their success to the promotion of reuse to the community and the flexibility involved with addressing future use of the site. Community action at the Chisman Creek site in Virginia actually prompted greater action than the capping strategy that was originally proposed. State involvement was also critical in reusing the Bowers Landfill site in Ohio as a wetland habitat.

Walt Graham asked how much additional money was spent to reuse the Industri-Plex site. Mr. Harris explained that there was no extra cost because of the design of the site. The mass transit authorities in the area also opted for a more protective remedy than the one presented by the Region. Addressing these issues requires walking a fine line between “betterment” and protectiveness. Tax breaks, recreational organizations, and the creation of jobs may provide other incentives to reuse these sites.

Paul Nadeau then discussed means of implementing reuse at Superfund sites. Promotion of reuse requires the “three ‘P’s of recycling:”

1. Promoting reuse opportunities.
2. Partnership and pilots, and
3. Policy refinement.

Mr. Nadeau reminded the group that protection of human health and the environment is still the top priority to the EPA. Regions should serve as a catalyst for reuse by using the initiative to accelerate Superfund cleanup. Policy should be modified to consider enforcement issues first and not depend upon consent decrees or mandates.

Successful site recycling depends upon careful planning at the preliminary stages of remediation. Mr. Nadeau recommends conducting a more thorough and comprehensive RI/FS to make a more informed decision in the ROD. It is important to recognize the possibility of reusing the Superfund site throughout the remediation process.

Mr. Nadeau stated that the successful promotion of reuse will come from developing tools for site managers to demonstrate the successful reuse of Superfund sites in all Regions. An information clearing house must also be established to mitigate financial risks at recycled sites to private insurance companies and banks. Guidance must also be adjusted to make IAGs more amenable to reuse. Mr. Nadeau also reported that guidance is needed for identifying when it is acceptable to spend more to reuse a Superfund site.

Pilots and demonstration projects should also be established to show how site recycling can be done effectively. Tim Fields is also interested in providing interactive agreements with local agencies, States, and Tribes to promote reuse. Partnerships should be fostered between EPA and USACE staff that have experience with civil works and real estate programs.

Rich McCollum asked how to decide what is an acceptable land use of a Superfund site when there is not an interested party. Mr. Nadeau answered that the Superfund program does not decide land use. Partnership with local agencies and the community is needed to decide how the site will be used. John Harris commented that one weakness to this approach is that communities are often limited in their land use planning expertise. Technical Assistance Grants (TAGs) may encourage community involvement in making land use decisions.

*USACE Civil Works Authorities: Beverly B. Getzen*

Beverly Getzen stated that the primary mission of the USACE Civil Works Program is to provide expertise for navigation, flood damage reduction, and ecosystem restoration. Other missions include planning assistance to states, Flood Plain Management Services (FPMS), and engineering research and development. Ms. Getzen recommended visiting the Civil Works Program web site at: <http://www.usace.army.mil/functions/cw/cecwp.htm>

Ms. Getzen mentioned that the Civil Works Program has developed several guidance documents which may be useful to encourage reuse at Superfund sites. *Project Modifications for Improving the Environment, Aquatic Ecological Restoration, and Beneficial Uses of Dredged Material* provide guidance on regulations and strategies that may be used in support of the reuse initiative.

*Examples of USACE Involvement in Reusing Superfund Sites*

James Waddell discussed the Glen Cove Brownfield site. The stigma attached to NPL sites was minimized by close cooperation between the Department of Energy (DOE), EPA, and the USACE. At Glen Cove, DOE provided funding to remove tungsten at the start of the project.

Reuse of the Koppers Coke site required coordination between the EPA, USACE, and State agencies. The site was capped with contaminated sediments that were stabilized with a concrete mixture. Koppers Coke, although not a Superfund site, is considered a success because of the development of an industrial park on the site.

**Advanced Technologies for Site Monitoring (RECAP)**

One of the goals of the RECAP program is to improve the inspection process for Superfund sites. Current oversight work is inhibited by the geographic disparity of project sites, the short duration of cleanup at some sites, and staffing limitations. RECAP provides access to sites by using

cameras that can be manipulated offsite via the Internet. The data can be stored and later retrieved.

RECAP allows real time oversight of cleanup activities from across the country. LTC Hills demonstrated how RECAP is being used at the Industrial Latex site. The RECAP project cost \$38 thousand dollars to implement at the site.

### **Cost Estimating Review**

Miguel Jumilla provided a status report of current efforts to improve the development of Independent Government Cost Estimates (IGCE). Three-member teams were established consisting of a cost estimator, a project manager, and an EPA representative. Mr. Jumilla pointed out that cost estimate documentation and deficiencies in detailing the level of effort (LOE) for work assignments are critical areas. The Walla Walla District study identified the following tools to assist in the preparation of the IGCE:

- C Automated systems and cost estimating software;
- C Model Statements of Work (SOW), to ensure that the LOE cost data is detailed;
- C Databases of historical cost data, updated and made available to the Regions;
- C Checklists, for reviewing work plans; and,
- C *The Cost Estimating Procedures Manual: Guide to Developing and Documenting Remedial Alternative Costs Estimates During the Feasibility Study.*

The draft assessment report was provided to the Regions on December 30, 1998, and should be complete by January 22, 1999. EPA Senior Management will be briefed on the assessment in February, and the draft summary report will be completed by March 31, 1999. Also, before issuance of the draft summary report, Superfund National Policy Managers will be briefed in March 1999.

The USACE also conducted cost estimate assessments for the DOE Office of Environmental Management (EM), during fiscal years 1996 through 1998. These assessments identified \$3.1 billion in potential savings after review of estimates, schedules, and technical scopes for 13 DOE sites. Assessments were conducted in two phases. An overview of the baseline estimates was first conducted to identify areas of potential cost savings. These potential savings areas were then investigated in detail to demonstrate mechanisms for cost savings.

Marcia Davies commented that cost estimating software is continuously reviewed and asked if MCASES or ERASER software was reviewed. Ken Skahn answered that these software tools are used for construction costs estimates. There are very few tools for estimating costs for LOE contracts. A comprehensive database of historical costs data would be very useful for estimating LOE and costs at the subtask level. Mr. Jumilla agreed that a database of LOE and cost data is



needed. The creation of this database will require coordination between EPA and the USACE. A description of the Cost Estimating Review is provided in the meeting materials (Appendix 3).

### **Contaminated Aquatic Sediment Remedial Guidance Workgroup**

Ernie Watkins discussed the creation of the Contaminated Aquatic Sediment Remedial Guidance Workgroup (CASRGW) to develop guidance on selecting a remedy at a contaminated sediment site. The Workgroup consists of seventy people from the EPA Regions, USACE, National Oceanic and Atmospheric Administration (NOAA), Fish and Wildlife Service (FWS), Office of Water (OW), and the Office of Solid Waste and Emergency Response (OSWER). Mr. Watkins hopes that the diversity of agencies and backgrounds represented in the Workgroup will support EPA's Contaminated Sediment Management Strategy and create a concise guide to remediating contaminated sediments.

The CASRGW guidance will provide concurrence from many government agencies, reference to existing guidance, and support restoration and beneficial use of sediment sites. Reference will be made to existing guidance from the Great Lakes National Program Office's (GLNPO) Assessment and Remediation of Contaminated Sediment (ARCS) documents. USACE and Environment Canada documents will also be used in the development of the guidance document. Mr. Watkins stated the CASRGW guidance document will focus on no action, monitored natural attenuation, capping, and dredging as remedial alternatives for contaminated sediment sites. No action will be divided into "Up-Front" and "Tail-End" determinations of no action. Up-Front no action occurs when a site is determined to present no risk to human health and the environment. Tail-End no action will occur when the amount of contamination exceeds the capacity of all other remedies. The premise of the Workgroup is that the contaminated sediment site is listed on the NPL and is in the feasibility stage of the remediation process.

The purpose of the CASRGW guidance is to use the National Contingency Plan (NCP) to select a remedial action at a contaminated sediment site. The guidance will focus on the five Superfund Balancing Criteria to screen the remediation alternatives. Overarching policy issues also must be resolved to ensure consistency among each of the alternatives.

Mr. Watkins also pointed out the CASRGW is striving to comply with the Administrator's goal of increasing the long-term effectiveness and permanence of remedies at Superfund sites. He pointed out that at the Manistique site, PRP data showed no long-term risk if a capping strategy were implemented. Investigation of the data at the site showed that PCB contamination would eventually escape the cap into the water column. Fish advisories and other resource losses would subsequently follow the breach of the cap.

The CASRGW will address tradeoffs between short-term and long-term impacts at a sediment site. Dredging and ex-situ remediation strategies pose short-term risks of resuspension,

volatization, or transport during the dredging and disposal processes. In-situ strategies, on the other hand, pose long-term risks of advection, bioturbation, erosion, or diffusion of contaminants into the water column. Finding a suitable balance between these potential risks requires close scrutiny. All remedial alternatives are potentially feasible at a contaminated sediment site. The challenge of the selection process is to choose a remedy that is both protective and cost effective.

Challenges faced by the CASRGW include balancing the intangible costs associated with a loss of resources and the Congressional direction for cost-benefit analysis. Construction cost uncertainty and the use of criteria for catastrophic event scenarios must also be resolved.

Mr. Watkins stated that the first draft of the CASRGW guidance document will be completed by April 30, 1999. The next CASRGW meeting will be in June 1999. A final version of the guidance will be completed by December of 2000 and will be included in the Federal Register.

Beverly Getzen pointed out that USACE staff stationed at Fort Belvoir may be able to assist in the risk analysis portions of the CASRGW guidance document.

## **Contracts**

### *USACE Experience with MARC: John Kirschbaum*

John Kirschbaum reviewed USACE experience with Multiple Award Remediation Contracts (MARC). MARC contracts in the Rapid Response program have a ceiling of \$150 million and are awarded for a two-year base period. This period may be extended with a three-year option and contracts have a minimum \$50,000 guarantee. For performance-based assignments under the MARC program, the new assignments are given based on past performance so that interest is maintained throughout the contract work.

Mr. Kirschbaum used his experience using Roy F. Weston as an example of a successful MARC contract. Roy F. Weston's removal experience prior to award of the Rapid Response MARC contract was limited to the EPA REACT contract. Although work at their first site was rocky, the contractor demonstrated dedication to the project and showed great flexibility in switching staff to accommodate the needs at the site. The General and Administration overhead rates for the site ranged from 3.5-4.0% instead of the typical 7-11% at other sites. Such a reduction in G&A rates demonstrated improved efficiency and improved negotiation processes at the site.

Rich McCollum asked how contractors were selected from among a group without performance experience. Mr. Kirschbaum answered that open competition and oral presentations may be enough to select the best candidate. He also pointed out that despite the low minimum guarantee, there was usually sufficient interest among contractors to increase competition.

*EPA Performance-Based Contracting Pilots: Derrick Montford*

Derrick Montford reported that the impetus for performance-based service contracting (PBSC) came from the Government Performance and Results Act. The goal of PBSC is to improve objectiveness and efficiency of contracting operations.

Pilot projects for PBSC have been conducted at the ABC One Hour Processing, Scrap Processing, Tar Creek, and Nashua River sites. An evaluation of Tar Creek demonstrated measures for improving efficiency and reducing costs that could be employed by USACE and EPA at other sites. SOWs for these sites showed more flexibility in sample size requirements and allowed innovative approaches to sampling techniques.

Paul Nadeau pointed out that the PBSC pilot projects have saved an estimated \$13 million and that those involved had been nominated for an EPA medal. Although no awards have been obtained yet, these individuals are still in the running for a Contract Management Award.

John Riley mentioned that the purpose of PBSCs is to provide flexibility to contractors in identifying the most efficient means of accomplishing a task. He explained that EPA tells “the contractor what needs to be done but not how to do it.” USACE involvement is crucial to determining when PBSC is appropriate at a site. Communication with the USACE is also needed for deciding when cost-reimbursement contracts should be used with PBSC. Mr. Nadeau also mentioned that a fact sheet is currently being created for developing PBSC Statements of Work.

*Contract Management of Cost-Reimbursement Contracts to Obtain Lowest Reasonable Costs:  
Calvin Curington*

Mr. Curington asked the group to refer to the Superfund Pocket Card when working with cost-reimbursement contracts. The Superfund Pocket Card contains eight “commandments” for cost-reimbursement contracting:

1. Risk management;
2. Technical knowledge;
3. Effective leadership;
4. Cost management;
5. Training;
6. Reward;
7. Project management; and
8. Superfund program construction management.

Mr. Curington stated that the management goal of cost-reimbursement contracts is cost avoidance. This goal requires understanding the technical resources needed at a site, proactively

directing the contractor, and challenging the contractor to consistently provide their best effort. Uncertainty is a natural part of the cost management process, but can be overcome with communication with the contractor to achieve the lowest reasonable cost.

At the Bunker Hill site, effective cost management resulted in costs savings of \$4.4 million. Cost management at the site included continuous review of the cost estimates to identify potential cost saving measures. Training for cost management is available from the Rapid Response program and the Start-up Tiger Teams.

James Waddell reminded the group that careful contract management is essential and will be reviewed periodically by USACE Headquarters.

#### *EPA Contracts 2000 Strategy: Art Flaks*

Art Flaks reviewed the development of EPA's long-term contracting strategy. The current structure of contracts will be the same except for Response Action Contracts (RACs). RACs will be split into remedial design (RD) and remedial action (RA) contracts. Remedial design contracts will include architectural and engineering contracts while remedial action contracts will be used for construction.

Mr. Flaks stated that the USACE will not be significantly impacted by the Contracts 2000 strategy. USACE will be more involved with RD contracts for RACs. EPA's own capacity for construction management may be a factor in USACE involvement in RA contracts. Mr. Flaks also commented that the implementation of the Contracts 2000 strategy has been delayed, but is expected to be in place by the end of the fiscal year.

Bob Warda asked why the RACs contracts were to be split into RA and RD components. Mr. Flaks answered that splitting the contracts should increase the EPA's ability to work with smaller organizations and reduce the number of umbrella contracts. Training will be needed to educate the Office of Management and Budget (OMB) on circumstances where this approach is not feasible.

#### **Community Involvement/Outreach: Panel Discussion**

Helen DuTeau began the panel discussion by introducing herself, Bob Cribbin, Larry Poindexter, and Cal Curington. Ms. DuTeau mentioned that a national community outreach workgroup has been created and has had monthly conference calls since last January. The focus of the workgroup is to improve community relations at relocation and removal sites. Comprehensive training is being developed that will enable USACE field personnel to address community concerns more effectively.

Community involvement is evolving toward a partnering process that extends beyond the current statutes. Technical Outreach for Communities is currently used by the USACE at non-NPL sites to address community relations issues. Ms. DuTeau pointed out that the use of Community Advisory Groups and the Joint Information Center will improve the effectiveness of communications between the EPA, the community, and USACE during response actions.

Calvin Curington commented that the USACE has a unique opportunity to become involved in these community involvement programs. Escambia and Agriculture Street Superfund projects are excellent examples of sites where community involvement is a critical factor in the success of relocation actions. Mr. Curington played a recording of a National Public Radio (NPR) broadcast concerning the process by which 350 families were relocated at the Escambia site.

The broadcast reported that 27 households were relocated because of their proximity to the contaminated material site, dubbed "Mount Dioxin" by the citizens. Citizens Against Toxic Exposure (CATE) representatives called for more fair and accurate real estate appraisals for the relocated households. According to Mr. Curington, Escambia is one of a couple of opportunities for USACE involvement in a relocation project where minorities represented a large component of the citizenry; the other is the Agriculture Street site in New Orleans.

Mr. Curington pointed out that community involvement is still EPA's responsibility, but the USACE is sometimes the agency most accessible to the local citizens. USACE staff need training to gain the confidence of EPA in addressing community concerns. Qualifications for addressing community issues also need to be identified.

Bob Cribbin then reminded the group that real estate acquisition must always address community involvement. USACE real estate staff should work closely with the appraisers to identify elements of value that may not be readily apparent. Citizens naturally consider the appraisals to be undervalued because of personal attachment to the property.

Mr. Cribbin explained that at Escambia, the goal was to fit relocation into the normal scope of work. USACE real estate staff negotiated forgiveness of loans to facilitate relocation. Although the pilot project was relatively successful, USACE was criticized for not providing enough information to the public concerning the importance of negotiation or benefit of title insurance. The challenge is to objectively provide information without influencing the ultimate decisions made by the citizens.

Larry Poindexter discussed the Agriculture Street site in Louisiana. The site was an undeveloped property adjacent to public housing and a community center. Local citizens are not pleased with the decision to remove and replace the topsoil at the site with geosynthetic landscaping. The citizens feel a buy-out is the only acceptable course of action. Citizens groups called for Congressional funding for relocation.

Mr. Poindexter expects that work at the site will not proceed after April or May. He stated that the community's inflexibility played a large part in the failure of the remedy process. Open public meetings were conducted throughout the remedy selection process, but dissension grew once the removal process began. At one point restraining orders were even issued against the removal action. The Agriculture Street community felt they were being forced to accept the decisions of the EPA because of the impossibility of relocation at the site.

### **Superfund O&M and Five-Year Review**

Ken Skahn reported that guidance is currently being developed by JoAnn Griffith to address O&M considerations. The EPA definition of O&M is confined to the effort and procedures needed to maintain a landfill cap, leachate collection system, pump and treat facility, or other Remediation system. Planning of the O&M procedures at a site should be done during the RI/FS stage of the remediation process. EPA's responsibilities for designing an O&M systems is to ensure that the system works and is cost effective. The first draft of the O&M guidance will be available in early February.

Greg Mellema discussed his experience with the five-year review process. The purpose of five-year reviews is to ensure that the response action remains protective of human health and the environment. Ensuring that the action taken at the site is still protective is dependent upon the extent of preliminary research conducted before the site visit. Reviewers must have a thorough understanding of how the site was designed before recommending modifications.

Mr. Mellema provided the Helen Kremer site as an example of where the five-year review identified \$300,000 annually in cost savings. Recommendations at the site included simplifying the design of the active gas collection system to improve efficiency. The cost of the Helen Kremer site review was \$20,000. A less intensive review of the Heleva, Lackawana, and Moyers Landfill sites was conducted for a combined total of \$25,000. The Mid-State Disposal site was reviewed for \$30,000 and provides a good example of how preliminary planning may allow a more intensive review.

Five-year reviews have identified design problems with erosion and surface drainage. These kinds of problems continue to be a problem because of caps designed with sharp angles. Vandalism is also a problem at many sites. Mr. Mellema reiterated that reviewing the RI/FS, ROD, and design drawings and documentation contribute greatly to the success of the review process. He also reminded the group that there will be an onsite workshop for conducting five-year reviews at the Lipari site in April.

Ken Skahn commented that he and Carol Bass are developing a model SOW for five-year reviews that will be included as an appendix in the five-year review guidance document.

### **Closing Remarks**

Larry Reed thanked the speakers and commented that it is good to review post-design effectiveness. EPA also hopes to provide greater assistance with community involvement. Recycling sites will also be a potential area of opportunity for involvement with the USACE.

Before the meeting adjourned, James Waddell pointed out that USACE involvement with EPA is an evolving process. USACE must be flexible in costing out services to the EPA to ensure customer satisfaction. Mr. Waddell also reminded the group that Region 2 FUSRAP considerations must still be addressed. Rates should be clarified so that the EPA is only charged for services that are actually provided.

## **Appendix 1 - SMR Meeting Attendee List**



**EPA/USACE Senior Management Review (SMR) Meeting Notes, 20 January 1999**

<b>Name</b>	<b>Organization</b>	<b>Official Symbol/ Region</b>	<b>Telephone Number</b>
John Adams	USACE	CEPR-P	(202) 761-5221
Shaheer Alvi	EPA	Region 2	(212) 637-4324
John Bartholomeo	USACE	CENAP-DP-M	(215) 656-6927
Karen Baukert	EPA	OERR	(703) 603-9046
Tom Billings	USACE	CESAD-PM	(404) 562-5211
Bill Bolen	EPA	Region 5	(312) 353-6316
Donald Bruce	EPA	Region 5	(312) 886-7241
Rhea Cohen	USACE	CEMP-RS	(202) 761-7584
Calvin Curington	USACE	CEMP-RS	(202) 761-1064
John Cunningham	EPA	OERR	(703) 603-8708
Joseph D'Agosta	USACE	CENAD-PM-M	(718) 491-8773
John Davidson	USACE	CESPD-PM-M	(415) 977-8245
Marcia Davies	USACE	CENWO-HX	(402) 697-2555
Helen DuTeau	EPA	OERR	(703) 603-8761
Ken Fisher	EPA	OERR	(703) 603-8764
Art Flaks	EPA	OERR	(703) 603-9088
John Frisco	EPA	Region 2	(212) 637-4400
Richard Gajdek	USACE	CENAN-PP-E	(212) 264-0137
Barbara Getzen	USACE	HQ	(202) 761-1980
Walter Graham	EPA	Region 3	(215) 814-3146
Dennis Hartmann	USACE	CEMP-RS	(203) 603-9697
Greg Herring	USACE	CENWO-PM-HA	(402) 221-7712
LTC Jeffrey Hills	USACE	CEMP-R	(202) 761-8824
Eric Hines	CE	CENWO-HX	(402) 697-2624
Tracy Hopkins	EPA	OERR	(703) 603-8738
Tom Hudspeth	USACE	CENWO-HX-G	(214) 767-2177
Mark Keast	USACE	CENWK-PE-EB	(816) 983-2795

**EPA/USACE Senior Management Review (SMR) Meeting Notes, 20 January 1999**

<b>Name</b>	<b>Organization</b>	<b>Official Symbol/ Region</b>	<b>Telephone Number</b>
John Kirschbaum	USACE	CENWO-PM-H	(402) 221-7714
Dave Koran	USACE	CEMP-RT	(202) 761-4989
Amir Kouhestani	USACE	CEMP-RS	(202) 761-5602
Anthony Levesanos	USACE	CEMP-RS	(212) 264-0304
Jack Mahon	USACE	CECC-C	(202) 761-8538
Rich McCollum	USACE	CENWK-PM-E	(816) 983-3370
Mike McGagh	EPA	Region 1	(617) 918-1428
Greg Mellema	USACE	CENWO-HX-G	(402) 693-2658
Althea Milburn	USACE	CEMP-RS	(202) 761-1601
Mark Mimick	EPA	OERR	(703) 603-8884
Derrick Montford	EPA	OERR	(703) 603-8939
Kevin Mould	EPA	HQ	(703) 603-8728
Paul Nadeau	EPA	OERR	(703) 603-8794
Mark Otis	USACE	CENAE-PP-EPB	(978) 318-8895
Larry Poindexter	USACE	MVN	(504) 862-2937
Aaron Polley	USACE	CERM-F	(202) 761-4998
Nancy M. Porter	USACE	CEMP-RS	(202) 761-5245
Larry Reed	EPA	HQ	(703) 603-8960
John Riley	EPA	OERR	(703) 603-8733
Bob Silva	USACE/EPA	CEMP-RS	(202) 260-4013
John Sassi	USACE	CENAD-ET-E	(718) 491-8754
Mike Scarano	USACE	CENAD-PP-M	(718) 491-8763
David Sills	USACE	CEMVD-PM-E	(601) 634-5026
Tom Simmons	USACE	CENWK-PM-E	(816) 983-3372
Ken Skahn	EPA	OERR	(703) 603-8801
John J. Smith	EPA	OERR	(703) 603-8802
Nash Sood	USACE	CEMP-RS	(202) 761-8618

**EPA/USACE Senior Management Review (SMR) Meeting Notes, 20 January 1999**

<b>Name</b>	<b>Organization</b>	<b>Official Symbol/ Region</b>	<b>Telephone Number</b>
Jim Strait	USACE	CEMP-RS	(202) 761-0414
Dan Tosoni	USACE	CENWD-MR-PM-H	(402) 697-2622
Karen Tomimatsu	EPA	OERR	(703) 603-8738
James Waddell	USACE	CEMP-RS	(202) 761-8879
Bob Warda	USACE	CELRD (GL) - P	(312) 353-3679
Ernie Watkins	EPA	OERR	(703) 603-9011

## **Appendix 2 - SMR Meeting Agenda**



## USACE / EPA Senior Management Review (SMR) Meeting Agenda

January 20, 1999

Conference Room 11 A&B  
EPA Crystal Gateway Office  
1235 Jefferson-Davis Highway  
Arlington, VA 22202



William Zobel - Moderator

- |           |  |  |
|-----------|--|--|
| 0730-0800 | <b>Registration</b>  |  |
| 0800-0830 | <b>Welcome and Introductions</b>   | James Waddell, USACE   |
|           | Mr. Larry Reed - HQ USEPA<br>LTC Jeff Hills - HQ USACE   |  |
| 0830-0900 | <b>Superfund Program Status/Update</b>   | John J. Smith, USEPA   |
|           | <ul style="list-style-type: none"><li>- Legislative changes</li><li>- Program changes and trends</li><li>- Possibility of Reauthorization being proposed by the Administration</li></ul>   |  |
| 0900-0920 | <b>Sound bytes</b>   | James Waddell, USACE<br>Ken Skahn, USEPA   |
|           | <ul style="list-style-type: none"><li>- Y2K problems</li><li>- Technical assistance to EPA - Chemistry labs</li><li>- Center of Expertise - Available services</li><li>- Rapid Response Team and Superfund</li><li>- EPA RI/FS Cost Estimating Guidance</li><li>- FUSRAP</li></ul> |  |
| 0920-1000 | <b>Access to USACE</b>   | Joint USACE/EPA Presentation   |
|           | <ul style="list-style-type: none"><li>- Business Managers</li><li>- USACE staff detailed to EPA</li><li>- Regional experience with Generic/Blanket IAG</li><li>- Start-up Teams</li></ul>  | Shaheer Alvi, USEPA<br>Mike Scarano, USACE<br><br>John Cunningham, USEPA<br>Mike Gross, USACE<br><br>William Bolen, USEPA<br>Greg Herring, USACE<br><br>John Kirschbaum, USACE |

**EPA/USACE Senior Management Review (SMR) Meeting Notes, 20 January 1999**

1000-1020     **Break**

1020-1050     **Advanced Technology for Site Monitoring (RECAP)**     LTC Jeff Hills, USACE  
Mike Knaggs, DOE  
Karl Stoeckle, DOE

- Real time demonstration of the RECAP System at the Industrial Latex Site
- Current use in construction
- Potential use in O&M
- Other uses of remote technology

1050-1140     **Reuse of Superfund Sites**     Joint USACE/EPA Presentation

- General Background     John Harris, USEPA  
Paul Nadeau, USEPA
- Civil Works Authorities     Beverly B. Getzen, USACE
- Examples of USACE Involvement in Reusing Superfund Sites:  
Glen Cove     James Waddell, USACE  
Koppers Coke     Mike Scarano, USACE
- Executing the "Fit"     USACE/EPA Panel
- Open Discussion

1140-1300     **Lunch**

1300-1330     **Cost Estimating Review**     Miguel Jumilla, USACE

- Project EM
- Walla Walla District review of EPA cost estimating process
- Future USACE involvement/assistance in cost estimating

1330-1400     **Contaminated Aquatic Sediment Remedial Guidance Workgroup (CASRGW)**     Ernie Watkins, USEPA

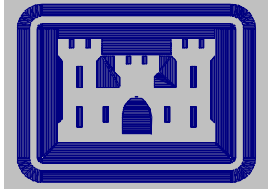
- EPA workgroup developing guidance for remediation of contaminated aquatic sediment

**EPA/USACE Senior Management Review (SMR) Meeting Notes, 20 January 1999**

- 1400-1440     **Contracts**     John Riley and Art Flaks, USEPA  
John Kirschbaum and Cal Curington, USACE
- USACE experience with MARC
  - EPA Contract 2000 Strategy
  - EPA Performance-Based Contracting Pilots
  - Contract management of cost-reimbursement contracts to obtain lowest reasonable cost
- 1440-1500     **Break**
- 1500-1540     **Community Involvement/Outreach**     Helen DuTeau, USEPA  
Larry Poindexter, Scott Saunders  
Cal Curington and Bob Cribbin, USACE
- USACE/EPA experience and solutions
  - Role of USACE in Community Outreach -- can it or should it be expanded?
  - Residential cleanup examples and lessons learned
- 1540-1600     **Superfund O&M and Five-Year Review**     Ken Skahn, USEPA  
Greg Mellema, USACE
- Current and future USACE involvement
  - Status report on guidance
- 1600-1630     **Closing Remarks**     James Waddell, USACE
- Mr. Larry Reed - HQ USEPA  
LTC Jeff Hills - HQ USACE

## **Appendix 3 - SMR Meeting Materials**





## **USACE / EPA Senior Management Review (SMR) Meeting**

20 January 1999

### Meeting Materials:

- C      Sound byte fact sheets:
  - Y2K Project -- Superfund Sites
  - Chemistry Laboratories -- Support to EPA Superfund Projects
  - Hazardous, Toxic, & Radioactive Waste Center of Expertise Specialists
  - Rapid Response Program
  - Project EPA -- Review of Cost Estimating Procedures
  - Formerly Utilized Sites Remedial Action Program (FUSRAP)
  
- C      Example Generic/Blanket IAG

U. S. ARMY CORPS OF ENGINEERS  
**YEAR 2000 PROJECT--SUPERFUND SITES**

**INTRODUCTION:**

Traditional computer programming, to conserve limited memory capacity, assigned only 6-digit codes for dates, with the last two digits signifying years in the 1900's, and also used numerical codes as error signals. It is now known that several imminent calendar anomalies, collectively described as "the Y2K problem," could disrupt computerized equipment, causing shut-downs or generation of erroneous information. At a Superfund site, as the U. S. Environmental Protection Agency (USEPA) recognizes, the failure of even a single processor chip could result in the release of contaminants into the environment or the malfunctioning of emergency response, monitoring, or leak detection systems. These date-related anomalies are:

- 1 Jan 2000—computers might read 00 as 1900;
- 9 Apr 1999—the 99<sup>th</sup> day of year might be read as 9999, a common error code;
- 9 Sept 1999—the 9<sup>th</sup> day of the 9<sup>th</sup> month might be read as 9999, a common error code;
- 10 Jan 2000—this is the first date that requires 7 digits;
- 29 Feb 2000—this date might have to be added because 1900 was not a leap year; and,
- 10 Oct 2000—this is the first date that requires 8 digits.

**STATUS OF Y2K PROJECT:**

In light of the potential Y2K problem, USEPA has asked the U. S. Army Corps of Engineers (USACE) to evaluate those Superfund sites for which USACE has or once had responsibility, whether currently on the NPL or not. From a universe of about 2000 such sites, the initial USACE review of project records resulted in a list of 54 with potential Y2K problems. To narrow the number further, reviewers would visit the design districts to look at site plans, operating manuals, and other materials; then visit the sites that still appear to have potential Y2K incompatibilities, to inspect the suspected equipment and determine what fixes need to be made. Finally, USACE would provide USEPA the teams' recommendations for making the corrections.

In late January 1999, USACE will begin a field test of seven of the 54 sites to find indications of Y2K problems that might be found on other sites. The USACE Hazardous, Toxic, and Radioactive Waste Center of Expertise will send a review team to two sites in USEPA Region 5, both of which are in Muskegon, Michigan: Bofors-Nobel Industries and Ott/Story/Cordova. The USACE Kansas City district will send a team to the other test sites, all in USEPA Region 2: Brewster Wellfield (NY), Claremont Polychemical (NY), Helen Kramer Landfill (NJ), Higgins Farm (NJ), and Lone Pine Landfill (NJ). After this field test, USEPA will determine what the next step should be.

**Y2K PROJECT POINTS OF CONTACT:**

*Rhea Cohen, CEMP-RS, (202) 761-7584*

*E-mail: Rhea.L.Cohen@usace.army.mil*

*Ken Skahn, USEPA Superfund Liaison to Corps, (703) 603-8801*

*E-mail: Skahn.Ken@epamail.epa.gov*

U. S. ARMY CORPS OF ENGINEERS

## CHEMISTRY LABORATORIES -- Support to EPA Superfund Projects

The USACE chemistry branch laboratories provide critical support for EPA Superfund projects in a variety of areas. Services include contract administration and oversight, sample inspection and sample management, analytical testing, technical support including expert witness testimony, project document review, and data review and evaluation. Support for EPA projects has historically been a significant component of the USACE laboratory missions. Listed below is pertinent information about the missions and functions of the USACE chemistry laboratories.

### **Environmental Chemistry Branch**

*Vicksburg, Mississippi*

**Mission:** Conduct research and development into environmental analytical methodology, provide analytical chemistry support to environmental quality R&D under civil and military programs, support special projects for the Corps Districts and Divisions, and assist with QA for HTRW and other general investigation and construction programs.

**Functions:**

- Develop and improve test methods to support environmental R&D programs
- Conduct research into methodologies needed for unique military compounds
- Conduct field studies to validate chemical test methods
- Provide specialized testing to support environmental research programs
- Provide QA support to Corps Civil Works and HTRW programs
- Prepare and develop performance evaluation samples for QA programs and evaluate results
- Provide specialized chemical analytical support to Corps Districts and other government agencies

**POC for ECB:**

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Phone: (601) 634-2726  
Fax: (601) 634-2742  
E-mail: [stronga@ex1.wes.army.mil](mailto:stronga@ex1.wes.army.mil)

### **Chemistry Quality Assurance Branch**

*Omaha, Nebraska*

**Mission:** Furnish chemistry QA and chemical analytical services in support of Chemical Data Quality Management for HTRW investigative and remedial activities as outline in ER 1110-10-263, and provide chemical testing and analytical services for water quality investigations.

**Functions:**

- Analyze QA split samples for HTRW and inspect sample shipments
- Prepare Chemical Quality Assurance Reports (CQAR) to compare contractor data to CQAB data
- Assess technical project and technical guidance documents
- Support USACE Laboratory Validation Program by performing commercial laboratory inspections, preparing and evaluating performance evaluation samples
- Provide information and data needed for contract management oversight and government environmental decision making

**POC for CQAB:**

Dr. Douglas Taggart, USAERDC-EE-Q  
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January 1999



**U.S. Army Corps of Engineers  
Hazardous, Toxic, and Radioactive Waste Center  
of Expertise Specialists**

## **Hazardous, Toxic & Radioactive Waste Center of Expertise Specialists**

12565 West Center Road

Omaha, Nebraska 68144-3869

*Marcia C. Davies, Director (402) 697-2555*

Adsorption Systems	<u>Lindsey Lien</u>	402-697-2580
	<u>Ed Mead</u>	402-697-2576
	<u>Laura Tate</u>	402-697-2582
Air Modeling/Air Monitoring	<u>Jim Cheney</u>	402-697-2565
	<u>Mark Fisher</u>	402-697-2587
Air Pollution Control	<u>Bill Crawford</u>	402-697-2579
	<u>Ed Mead</u>	402-697-2576
Air Sparging	<u>Dave Becker</u>	402-697-2655
Air Stripping Systems	<u>Bill Crawford</u>	402-697-2579
	<u>Ed Mead</u>	402-697-2576
	<u>Laura Tate</u>	402-697-2582
Aquifer Testing	<u>Sam Bass</u>	402-697-2654
	<u>Dave Becker</u>	402-697-2655
Asbestos Abatement	<u>Rod Dolton</u>	402-697-2586

## Asbestos Abatement

	<u>Sandy Frye</u>	402-697-2535
	<u>Terry Tomasek</u>	402-697-2690
Base Realignment and Closure (BRAC) - Army	<u>Kellie Kachek</u>	402-697-2630
BRAC - Air Force	<u>Mike Filips</u>	402-697-2625
Biofouling of Wells	<u>Steve White</u>	402-697-2660
Bioremediation (Bio-Slurry, Bioventing, Composting, Landfarming)	<u>Dave Becker</u>	402-697-2655
	<u>Chuck Coyle</u>	402-697-2578
Brownfields	<u>Ric Hines</u>	402-697-2624
<b>C</b> hemical Data Quality Management	<u>Kevin Coats</u>	402-697-2563
	<u>Chung-Rei Mao</u>	402-697-2570
	<u>Joe Solsky</u>	402-697-2573
Chemistry, Environmental	<u>Kevin Coats</u>	402-697-2563
	<u>Jan Dunker</u>	402-697-2566
	<u>Cheryl Groenjes</u>	402-697-2568
	<u>John Nebelsick</u>	402-697-2572
Chemical Feed Systems	<u>Bob Saari</u>	402-697-2581
	<u>Laura Tate</u>	402-697-2582
Chemical Oxidation: UV Systems	<u>Bill Crawford</u>	402-697-2579
	<u>Lindsey Lien</u>	402-697-2580
Compatibility Testing	<u>Steve Butler</u>	402-697-2656
	<u>Dave Jaros</u>	402-697-2668
Computer Applications (GIS/CADD)	<u>Sam Bass</u>	402-697-2654
Contracting Strategies	<u>Rick Morgan</u>	402-697-2441
Corrosion Control	<u>Bill Crawford</u>	402-697-2579
	<u>Bob Saari</u>	402-697-2581
Cost Reimbursable Contracts	<u>Rick Morgan</u>	402-697-2441
Cost Reimbursable Contracts - Administration	<u>Craig Pennell</u>	402-697-2632
	<u>Tom Pfeffer</u>	402-697-2620

Cost Engineering:	<u>Jim Peterson</u>	402-697-2612
MCACES, HazRisk, HCAS	<u>Stan Hanson</u>	402-697-2609
RACER Cost Tools	<u>Kate Peterson</u>	402-697-2610
Cost Recovery Documentation	<u>Lucy Harris</u>	402-697-2433
	<u>Cheryl Young</u>	402-697-2434
<b>D</b> ata Quality Objectives and Scoping	<u>Sandy Frye</u>	402-697-2635
	<u>John Nebelsick</u>	402-697-2672
	<u>Heidi Novotny</u>	402-697-2626
	<u>Terry Walker</u>	402-697-2591
	<u>Steve White</u>	402-697-2660
Dredging/Sediment Sampling	<u>Jack Keeton</u>	402-697-2657
<b>E</b> lectronic Data Management and Information Management Systems (LIMS)	<u>Jan Dunker</u>	402-697-2566
	<u>Joe Solsky</u>	402-697-2573
Environmental Law	<u>Ann Wright</u>	402-697-2466
Environmental Quality Project Management	<u>Craig Pennell</u>	402-697-2632
Environmental Regulations - General	<u>Beverly VanCleaf</u>	402-697-2559
	<u>Sandi Zebrowski</u>	402-697-2562
Environmental Regulations - Specific		
Clean Air Act, Lead, and Asbestos	<u>Sandy Frye</u>	402-697-2635
Clean Water Act and Sludge	<u>Ed Bave</u>	402-697-2634
Emergency Planning and Community Right-to-Know	<u>Rick Waples</u>	402-697-2560
PCB's and USTs	<u>Claudia Wiethop</u>	402-697-2561
Explosives Contamination	<u>Chuck Coyle</u>	402-697-2578
	<u>Bill Crawford</u>	402-697-2579
<b>F</b> iltration and Dewatering	<u>Lindsey Lien</u>	402-697-2580
	<u>Laura Tate</u>	402-697-2582
Floating Product Recovery	<u>Dave Becker</u>	402-697-2655
	<u>Bill Crawford</u>	402-697-2579

Formerly Used Defense Sites (FUDS)	<u>Roger Hager</u>	402-697-2619
Formerly Used Sites Remedial Action Program (FUSRAP)	<u>Tom Pfeffer</u>	402-697-2620
<b>G</b> eophysical, Surface and Downhole Methods	<u>Dave Becker</u>	402-697-2655
Geochemistry	<u>Steve White</u>	402-697-2660
Geostatistics	<u>Dave Becker</u>	402-697-2655
Geosynthetics	<u>Steve Butler</u>	402-697-2656
	<u>Dave Jaros</u>	402-697-2668
Geotechnical Testing	<u>Steve Butler</u>	402-697-2656
	<u>Dave Jaros</u>	402-697-2668
Ground Water Extraction	<u>Sam Bass</u>	402-697-2654
	<u>Dave Becker</u>	402-697-2655
	<u>Steve White</u>	402-697-2660
Ground Water Modeling	<u>Sam Bass</u>	402-697-2654
<b>H</b> TRW Guidance Development	<u>Walt Deane</u>	402-697-2617
HTRW Health and Safety	<u>Rod Dolton</u>	402-697-2586
	<u>Thom Donaldson</u>	402-697-2583
	<u>Mark Fisher</u>	402-697-2587
	<u>Terry Tomasek</u>	402-697-2590
Health Physics/Radiation Safety	<u>Brain Hearty</u>	402-697-2478
	<u>Julie Peterson</u>	402-697-2592
HELP Model	<u>Greg Mellema</u>	402-697-2658
<b>I</b> nformation Management Systems: Superfund-LRS, HTRW-WBS, PROMIS	<u>Walt Deane</u>	402-697-2617
Innovative Technology	<u>Jeff Breckenridge</u>	402-697-2577
	<u>Johnnie Shockley</u>	402-697-2558
Installation Restoration Program (IRP)		
Army	<u>Craig Pennell</u>	402-697-2632



Army IRP Work Authorizations Directives (WAD's)	<u>Brenda Bremer</u>	402-697-2424
Air Force IRP	<u>Mike Filips</u>	402-697-2625
<b>L</b> aboratory Validation	<u>Kevin Coats</u>	402-697-2563
	<u>Chung-Rei Mao</u>	402-697-2570
	<u>Lab Validation Administer</u>	402-697-2574
Landfill Covers/Liners	<u>Steve Butler</u>	402-697-2656
	<u>Dave Jaros</u>	402-697-2668
	<u>Greg Mellema</u>	402-697-2658
	<u>Mary Roth</u>	402-697-2659
Landfill Off-Gas Collection	<u>Steve Butler</u>	402-697-2656
	<u>Greg Mellema</u>	402-697-2658
Landfill Off-Gas Treatment	<u>Bill Crawford</u>	402-697-2579
	<u>Laura Tate</u>	402-697-2582
Lead Paint Abatement	<u>Rod Dolton</u>	402-697-2586
	<u>Sandy Frye</u>	402-697-2635
	<u>Terry Tomasek</u>	402-697-2590
Lessons Learned System	<u>Claudia Wiethop</u>	402-697-2561
Low Level Radioactive Waste	<u>Brian Hearty</u>	402-697-2478
	<u>Julie Peterson</u>	402-697-2592
<b>M</b> anifesting	<u>Ed Bave</u>	402-697-2634
	<u>Beverly VanCleeef</u>	402-697-2559
	<u>Sandi Zebrowski</u>	402-697-2562
Metals Treatment	<u>Chuck Coyle</u>	402-697-2578
	<u>Ed Mead</u>	402-697-2576
	<u>Bob Saari</u>	402-697-2581
Monitoring Wells, Installation and Sampling	<u>Sam Bass</u>	402-697-2654
	<u>Jack Keeton</u>	402-697-2657
	<u>Steve White</u>	402-697-2660



<b>N</b> atural Attenuation	<u>Dave Becker</u>	402-697-2655
	<u>Chuck Coyle</u>	402-697-2578
<b>O</b> il/Water Separators	<u>Bob Saari</u>	402-697-2581
<b>P</b> ermeable Reaction Walls	<u>Steve White</u>	402-697-2660
Potentially Responsible Party (PRP)	<u>Roger Hager</u>	402-697-2619
Investigations	<u>Ann Wright</u>	402-697-2466
Pollution Prevention	<u>Johnnie Shockley</u>	402-697-2558
Program and Project Management for Studies and Training	<u>Don Ohnstad</u>	402-697-2615
Pumps, Piping, Tanks	<u>Bill Crawford</u>	402-697-2579
	<u>Lindsey Lien</u>	402-697-2580
<b>R</b> adiochemistry	<u>Kevin Coats</u>	402-697-2563
	<u>Jan Dunker</u>	402-697-2566
Relative Risk Site Evaluation	<u>Roger Hager</u>	402-697-2619
Risk Assessment	<u>Cathy Forget</u>	402-697-2588
	<u>Helen Mead</u>	402-697-2589
	<u>Anita Meyer</u>	402-697-2585
	<u>Terry Walker</u>	402-697-2591
<b>S</b> ewage/Water Supply	<u>Bob Saari</u>	402-697-2581
	<u>Laura Tate</u>	402-697-2582
Site Characterization and Analysis Penetrometer System (SCAPS)	<u>Sam Bass</u>	402-697-2654
Slurry Walls	<u>Steve Butler</u>	402-697-2656
	<u>Dave Jaros</u>	402-697-2668
	<u>Greg Mellema</u>	402-697-2658
Soil Gas Sampling	<u>Dave Becker</u>	402-697-2655
	<u>Steve White</u>	402-697-2660
Soil Sampling Methods	<u>Sam Bass</u>	402-697-2654

## Soil Sampling Methods

	<u>Dave Becker</u>	402-697-2655
	<u>Jack Keeton</u>	402-697-2657
Soil Vapor Extraction	<u>Dave Becker</u>	402-697-2655
	<u>Chuck Coyle</u>	402-697-2578
	<u>Bill Crawford</u>	402-697-2579
Soil Washing	<u>Lindsey Lien</u>	402-697-2580
	<u>Bob Saari</u>	402-697-2581
Solidification/Stabilization	<u>Steve Butler</u>	402-697-2656
	<u>Steve White</u>	402-697-2660
Statistical Evaluations	<u>Dave Becker</u>	402-697-2655
Streamlined Oversight	<u>Tom Pfeffer</u>	402-697-2620
Superfund	<u>Ric Hines</u>	402-697-2624
Superfund Interagency Agreements	<u>Marvene Seaman</u>	402-697-2425
<b>T</b> echnical Project Planning	<u>Heidi Novotny</u>	402-697-2626
Technical Review Procedures	<u>Heidi Novotny</u>	402-697-2626
Total Environmental Restoration Contract (TERC)	<u>Tom Pfeffer</u>	402-697-2620
Thermal Treatment: Incineration, Low Temperature Thermal Desorption	<u>Bill Crawford</u>	402-697-2579
	<u>Ed Mead</u>	402-697-2576
	<u>Laura Tate</u>	402-697-2582
<b>U</b> nderground Storage Tanks	<u>Lindsey Lien</u>	402-697-2580
	<u>Bob Saari</u>	402-697-2581

**F**AX NUMBERS:

- U.S. Army Corps of Engineers HTRW Center of Expertise 402-697-2595
- Geoenvironmental & Process Engineering Branch 402-697-2673
- Environmental Cost, Compliance & Technology Branch 402-697-2639
- Environmental Studies & Liaison Branch 402-697-2613
- Chemical Data Quality Management Branch 402-697-2595
- Environmental Health & Safety Branch 402-697-2595

August 1998

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**INTERNET ADDRESS: <http://www.environmental.usace.army.mil>**

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**HTRW-CX Information Page**

# U.S. ARMY CORPS OF ENGINEERS RAPID RESPONSE PROGRAM

## INTRODUCTION

When the On-Scene Coordinators (OSCs) of the U.S. Environmental Protection Agency (USEPA) Superfund Program are faced with site contamination that requires assistance from outside sources, they can call on the U.S. Army Corps of Engineers (USACE) Rapid Response Program (RRP). Available for removal and remedial actions in a cost-effective, time-sensitive manner, the RRP offers technical expertise, contracting capacity, and site management experience. The RRP team has proven to be an effective augmentation of the OSCs' already established capabilities on numerous sites throughout the country needing cleanup under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

## TYPICAL PROJECTS

- RCRA/ CERCLA response actions
- Drum characterization, bulking, disposal
- Low-level radioactive waste/ soil removal, disposal
- Polychlorinated biphenyl (PCB) removal
- On-site low temperature thermal desorption of volatile organic compounds (VOCs)
- Remediation of unexploded ordnance/ chemical warfare materials
- In-situ remediation--e.g., reactive barrier systems, soil vapor extraction
- Fast-track landfill construction, capping
- Contaminated soil/ landfill slope stabilization
- Passive and active contaminated groundwater treatment/ product recovery

## FEATURES

- Time-critical removal/ remedial action capability for federal, state, and international agencies
- On-site and fully operational within 3 to 40 days
- Full-time site presence/ management by RRP On-Site Representative
- Cost-effective: cost reimbursable contracting, daily cost tracking and reporting, design/ build business philosophy, intensive cradle-to-grave government management
- Operational since 1989: 24 dedicated, trained, experienced personnel plus comprehensive technical staff, including environmental scientists, design engineers
- Through 1998, 240 projects completed for nearly \$225 million

## RAPID RESPONSE CONTRACTORS

IT Corporation, Roy F. Weston Corporation  
Total contract capacity: \$150 million

## RECENT RAPID RESPONSE PROGRAM SUPPORT TO USEPA ON-SCENE COORDINATORS

**Region 4**---Methyl parathion business decontamination/ restoration, Pascagoula, MS, fiscal year (FY) 1997---Chattanooga Creek (Tennessee Products), coal tar removal, Chattanooga, TN, FY 1997

**Region 5**---Methyl parathion residential restoration, Chicago, IL, FYs 1997, 1998---PCB contaminated sediment removal, Bryant Mill Pond, Kalamazoo, MI, FY 1998

**Region 6**---Residential asbestos abatement/ replacement in kind, West Bank Asbestos Site, New Orleans, LA, FYs 1997, 1998

**Region 8**---Coal tar removal from Little Sioux River at Fawick Park, Sioux Falls, SD, FYs 1997, 1998  
---Residential lead removal, Kennecott Mines Superfund Site, Harriman, UT, FY 1998

## RAPID RESPONSE PROGRAM POINT OF CONTACT

Mr. John Kirschbaum P.E.

Telephone: (402) 221-7714

Pager: (888) 761-7639

E-Mail: john.p.kirschbaum@usace.army.mil

U. S. ARMY CORPS OF ENGINEERS  
**PROJECT EPA--Review of Cost Estimating Procedures**

The U. S. Environmental Protection Agency (USEPA) has asked the U. S. Army Corps of Engineers (USACE) to perform a review of their cost estimating procedures and make recommendations for improvements. Called Project EPA, this review has been conducted by the USACE Walla Walla district since mid-1998. It addresses the cost estimating policies, procedures, automated cost estimating systems, supporting databases, and routine work practices of the ten USEPA regional offices.

Regarding the estimates performed and used to issue work assignments for Superfund projects, the study addresses the following matters:

- Available guidance in USEPA headquarters and regional offices
- Training completed by personnel who prepare IGCEs
- Adequacy of statements of work to serve as basis for developing independent government cost estimates (IGCEs)
- Procedures and processes for arriving at approved work assignment budgets
- Availability and use of automated systems in headquarters and regional offices to support preparation of IGCEs
- Availability of historical cost data
- Quality and documentation of data included in IGCEs

Small teams of reviewers have visited eight of the ten Regional Offices so far. The teams meet with assigned USEPA representatives at each of the offices and collect data in a working file containing the checklist and notes of the visit. No formal reports are being issued about the individual Regional Office reviews. Instead, USACE will issue a summary report at the end of Project EPA in March 1999.

**PROJECT EPA POINTS OF CONTACT:**

*Mr. Miguel Jumilla, CEMP-EE, (202) 761-1359  
E-mail: miguel.d.jumilla@usace.army.mil*

*Mr. Kim Callan, CENWW-ED-C, (509) 527-7511  
E-mail: kim.c.callan@usace.army.mil*

**FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM**

The fiscal year (FY) 1998 Energy and Water Appropriations Act, signed on October 13, 1997, transferred management of the Formerly Utilized Sites Remedial Action Program (FUSRAP) from the U. S. Department of Energy (USDOE) to the U. S. Army Corps of Engineers (USACE). After 17 years of USDOE management, FUSRAP still had 22 sites in need of remediation, mostly located in St. Louis, MO, northern New Jersey, and the Buffalo, NY vicinity. In the transfer, the Congress provided \$140 million in multi-year funding, or approximately twice the appropriation to USDOE for FUSRAP in FY 1997.

**FY 1998 ACTIVITIES:**

- Seamless transition, no schedule slippages attributable to transfer
  - program/project management transferred from USDOE-Oak Ridge, TN to Corps geographic districts
  - USACE/USDOE Memorandum of Understanding in negotiation to facilitate cooperation
- Remediation under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), with oversight by U. S. Environmental Protection Agency (USEPA) and states
- Site-by-site assessment completed, reported to Congress

**HIGHLIGHTS:**

- St. Louis, MO**—Began interim removal actions at St. Louis Airport and vicinity sites and at the Latty Avenue, Hazelwood interim storage site; completed Record of Decision (ROD) for cleanup of St. Louis downtown site; developing single ROD for airport and vicinity sites
- Northern New Jersey**—Began interim removal actions at Maywood, Middlesex, and Wayne sites, and now developing RODs for these sites
  - at Wayne, NJ: disposed of subsurface contaminated materials, assisted U. S. Department of Justice settlement with W. R. Grace Co. for payment of share of cleanup costs
  - at Maywood, NJ: Remediated 15 locations in vicinity of residential properties
  - at Middlesex, NJ: Accelerated disposal of interim storage pile in advance of new lead disposal regulations that would have increased costs by as much as \$40 million
- Buffalo, NY vicinity**—Completed ROD for cleanup of Ashland 1, Ashland 2, Seaway Area D, all in Tonawanda, NY; now developing separate ROD for Linde site in Tonawanda
  - at Ashland 1: Beginning remedial action
  - at Ashland 2: Removed most of contaminated material, now completing remedial action
  - at Painesville, OH site: Beginning interim remedial action

**FUSRAP POINTS OF CONTACT:**

**Mr. Kip Huston, (202) 761-8100**

**E-mail: [kip.r.huston@usace.army.mil](mailto:kip.r.huston@usace.army.mil)**

**Mr. Amir Kouhestani, (202) 761-5602**

**E-mail: [amir.kouhestani@usace.army.mil](mailto:amir.kouhestani@usace.army.mil)**

**EPA SUPERFUND PROGRAM**  
**Generic Interagency Agreements**  
**As of 8 December 1998**

file:generic.xls

<b>EPA Region</b>	<b>LAG Number</b>	<b>Type of Work</b>	<b>Total Funding Received</b>	<b>Remaining Balance</b>	<b>Expiration Date</b>
2	DW96941642	Technical Assistance	250,000	1,000	9/30/99
2	DW96941632	Technical Assistance Niagara Falls Area	3,600,000	170,000	12/1/99
2	DW96941709	Technical Assistance	325,000	11,000	12/31/99
2	DW96941744	Technical Assistance	500,000	467,000	8/31/99
3	DW96943857	Technical Assistance	235,000	110,000	9/30/99
4	DW96945528	RD or RA Oversight Activities - Federal Facilities	180,000	45,800	9/30/99
4	DW96945757	Technical Assistance in Planning & Relocation	1,300,000	1,000,000	3/31/00
4	DW96945732	Technical Assistance in Planning & Relocation	8,470,000	612,300	9/30/99
4	DW96934534	Technical Assistance Trust Fund Lead	987,845	1,460	4/30/99
4	DW96945815	Technical Assistance	1,000,000	1,000,000	6/30/00
4	DW96934533	Technical Assistance Enforcement Lead	1,400,000	175,925	9/30/99
5	DW96947659	Technical Assistance and Design Support	1,170,000	327,314	9/30/00
5	DW96947840	Rapid Response Support on Removal Actions	5,350,000	700,600	12/31/00
6	DW96950233	Rapid Response Support on Removal Actions	24,342,500	1,988,000	9/30/01
8	DW96953768	Rapid Response - Removal Assistance	7,600,000	1,708,000	11/1/99
8	DW96953678	Technical Assistance	859,700	120,249	12/30/99
9	DW96955370	Technical Assistance Navajo Uranium Mines	562,500	0	12/31/01



United States Environmental Protection Agency  
Washington DC 20460

EPA

Interagency Agreement /  
Amendment

Part I - General Information

1. EPA / IAG Identification Number

DW96953678-01-0

2. Other Agency ID Number

3. Type of Action

NEW PROJECT

4. Funding Location  
by Region

08

5. Program Office  
Abbreviation

8HWM-SR

6. Name and Address of EPA Organization

ENVIRONMENTAL PROTECTION AGENCY  
HAZARDOUS WASTE MANAGEMENT DIVISION  
999 18TH STREET, SUITE 500  
DENVER, CO 80202-2466

7. Name and Address of Other Agency

U.S. ARMY CORPS OF ENGINEERS (USACE)  
ENGINEERING DIVISION, MISSOURI RIVER  
12565 WEST CENTER ROAD  
OMAHA, NE 68144-3869

8. Project Title  
GENERIC IAG FOR TECHNICAL SUPPORT FOR PROJECT PLANNING ON CERCLA SITES.

9. EPA Project Officer (Name, Address, Telephone Number)

LEVINE, BARRY *Jim Hanick*  
PROJECT OFFICER  
999 18TH STREET, SUITE 500  
DENVER, CO 80202-2466  
(303) 293-1843 *303-312-6725*

10. Other Agency Project Officer (Name, Address, Telephone Number)

HARRIS, LUGY *Marven Jeaman*  
PROJECT MANAGER *U.S. Army Engr. (HTRW-CL)*  
USACE, ENGINEERING DIV. MISSOURI RIVER  
OMAHA, NE 68144-3869 *12565 W. Center Rd.*  
(402) 221-7227 *Omaha, NE 68144-3869*

11. Project Period

08/31/94 to 09/30/96

12. Budget Period

08/31/94 to 09/30/96

*(402) 697-2425*

13. Scope of Work (Attach additional sheets, as needed)

This Generic Interagency Agreement has been established for the Army Corps of Engineers to provide support to EPA through a Work Authorization Form (WAF) as outlined in the attached Scope of Work.

The technical assistance provided by the Corps under this IAG does not duplicate any other work we are currently or plan to do in-house. The specialized experience available through the Corps will help us to review key documents and prepare others that EPA employees either do not have the time to complete or do not have the expertise.

*B2 765*  
*CCSC B21*  
*CWIS No 18H22*

14. Statutory Authority for Both Transfer of Funds and Project Activities

CERCLA: SEC. 104

15. Other Agency Type

FEDERAL  
AGENCY

FUNDS	PREVIOUS AMOUNT	AMOUNT THIS ACTION	AMENDED TOTAL
5. EPA Amount	0	100,000	
7. EPA In-Kind Amount	0	0	
8. Other Agency Amount	0	0	
9. Other Agency In-Kind Amount	0	0	
10. Total Project Cost	0	100,000	

16. Fiscal Information

Program Element	FY	Appropriation	Doc. Control No.	Account Number	Object Class	Obligation/Deoblig. Amt.
TFAY9A	94	68-20X8145	LTA033	4TFA08L900	25.07	20,000
TFAY9A	94	68-20X8145	LSH068	4TFA8ALHZZ	25.07	80,000



## Part II - Approved Budget

EPA IAG Identification Number  
DW96953678-01-0

22. Budget Categories	Itemization of This Action	Itemization of Total Project Estimated Cost to Date
a) Personnel	85,000	85,000
b) Fringe Benefits	0	0
c) Travel	15,000	15,000
d) Equipment	0	0
e) Supplies	0	0
f) Procurement / Assistance	0	0
g) Construction	0	0
h) Other	0	0
i) Total Direct Charges	100,000	100,000
j) Indirect Costs: Rate <u>0.00</u> % Base \$ _____	0	0
k) Total:		
EPA Share: <u>100.00</u> % (Other Agency Share <u>0.00</u> %)	100,000	100,000

l. Is Equipment authorized to be furnished by EPA or leased, purchased, or rented with EPA funds? ☐ Yes ☒ No

Identify all equipment costing \$1000 or more.)

m. Are any of these funds being used on extramural agreements? (See Item 22f.) ☐ Yes ☒ No

Type of extramural agreement

☐

Grant

☐

Cooperative Agreement

☐

Procurement (includes Small Purchase Order)

Contractor / Recipient Name (if known)

Total Extramural Amount under this Project

Percent Funded by EPA (if known)

100.00

## Part III - Funding Methods and Billing Instructions

☒ Funds-Out Agreement (Note: EPA Agency Location Code (ALC) - 68010727)☒ Disbursement Agreement☒

Repayment

Request for repayment of actual costs must be itemized on SF-1080 and submitted to the Financial Management Office, Cincinnati, OH 45268:

☒

Monthly

☒

Quarterly

☐

Upon Completion of Work

☐

Advance

Only available for use by Federal agencies on working capital fund or with appropriate justification of need for this type of payment method. Unexpended funds at completion of work will be returned to EPA. Quarterly cost reports will be forwarded to the Financial Management Center, EPA, Cincinnati, OH 45268.

☐Allocation  
Transfer-Out

Used to transfer obligational authority or transfer of function between Federal agencies. Must receive prior approval by the Office of the Comptroller, Budget Division, Budget Formulation and Control Branch, EPA Hqtrs. Forward appropriate reports to the Financial Reports and Analysis Branch, Financial Management Division, PM-226F, EPA, Washington, DC 20460.

☐

Funds-In Agreement

☐

Reimbursement Agreement

☐

Repayment

☐

Advance

☐

Allocation Transfer-In

Other Agency's IAG Identification Number

EPA Program Office Allowance Holder/Resp. Center No.  
08L

Other Agency's Billing Address (include ALC or Station Symbol Number)

Other Agency's Billing Instruction and Frequency

## Part IV - Acceptance Conditions

EPA IAG Identification Number  
DW96953678-01-0

## 7. General Conditions

The other agency covenants and agrees that it will expeditiously initiate and complete the project for which funds have been awarded under this agreement.

## 8. Special Conditions

See Attachment B for Terms and Conditions

## Part V - Offer and Acceptance


- OTE: 1) For Funds-Out actions, the agreement/amendment must be signed by the other agency official in duplicate and one original returned to the Grants Administration Division for Headquarters agreements or to the appropriate EPA Regional IAG administration office within 3 calendar weeks after receipt or within any extension of time as may be granted by the EPA. The agreement/amendment must be forwarded to the address cited in item 29 after acceptance signature. Receipt of a written refusal or failure to return the properly executed document within the prescribed time may result in the withdrawal of the offer by EPA. Any change to the agreement by the other agency subsequent to the document being signed by the EPA Action Official, which the Action Official determines to materially alter the agreement/amendment, shall void the agreement/amendment.
- 2) For Funds-In actions, the other agency will initiate the action and forward two original agreements/amendments to the appropriate EPA program office for signature. The agreements/amendments will then be forwarded to the appropriate EPA IAG administration office for acceptance signature on behalf of the EPA. One original copy will be returned to the other agency after acceptance.

EPA IAG Administration Office (for administrative assistance)	EPA Program Office (for technical assistance)
29. Organization / Address US ENVIRONMENTAL PROTECTION AGENCY GRANTS, AUDIT & CONTRACTS BR., BPM-GAC 999 18TH STREET DENVER, CO 80202-2466	30. Organization / Address ENVIRONMENTAL PROTECTION AGENCY HAZARDOUS WASTE MANAGEMENT DIVISION 999 18TH STREET, SUITE 500 DENVER, CO 80202-2466

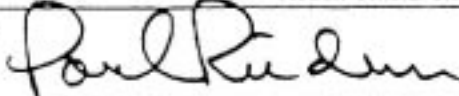
## Certification

All signers certify that the statements made on this form and all attachments thereto are true, accurate, and complete. Signers acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

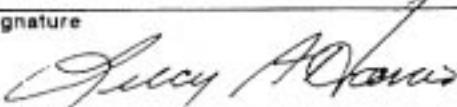
Decision Official on Behalf of the Environmental Protection Agency Program Office

Signature	Typed Name and Title	Date
	ROBERT L. DUPREY, DIRECTOR HAZARDOUS WASTE MANAGEMENT DIVISION	9/1/94

Action Official on Behalf of the Environmental Protection Agency

Signature	Typed Name and Title	Date
	KERRIGAN G. CLOUGH PARA FOR POLICY AND MANAGEMENT	SEP 13 1994

Authorizing Official on Behalf of Other Agency

Signature	Typed Name and Title	Date
	LUCY A. HARRIS Chief, Budget Division	9/21/94

Scope of Work for Generic Interagency Agreement  
Between U.S. Environmental Protection Agency Region VIII  
And the U.S. Army Corps of Engineers

I. Introduction

The U.S. Army Corps of Engineers (USACE) has provided support for the Environmental Protection Agency Region VIII (EPA) in a variety of areas. This work was accomplished using site-specific interagency agreements (IAGs). For major work assignments such as remedial designs or remedial actions, site-specific IAGs are the most appropriate vehicle. However, from time to time EPA has a need for shorter-term, smaller dollar-value technical assistance. The purpose of this IAG is to establish a mechanism and implementation procedures to enable USACE to provide technical support to EPA on these smaller projects. Assignments under this IAG will be consistent with this statement of work (SOW) and generally cost less than \$20,000 and last for less than one year.

(Note: Dollar Limit is optional)

Work conducted under this IAG will be done consistent with the EPA/USACE Memorandum of Understanding (MOU).

II. Scope of Services

This IAG can be used to obtain the following services:

A. Technical assistance for project planning

1. Perform familiarization reviews of Remedial Investigation/Feasibility Studies (RI/FS) and Records of Decision (ROD) to assist EPA and USACE in preparing for potential site specific IAG assignments and to provide technical feedback to EPA.
2. Attend public meetings as preparation and background for potential USACE assignments and/or to provide technical support for EPA site managers and staff.
3. Provide technical support for initial work plan and scope of work development for planned site specific assignments to USACE. This can include visits to meet with Region VIII and other EPA staff as well as familiarization site visits. A primary objective of these activities is to speed up and facilitate the early project planning and site specific IAG development to permit earlier project starts, improve project planning, and help assure high quality performance.

B. Technical Assistance and Design Support for Sites Using ARCS or other EPA contractors for site activities.

1. Provide cost estimates and supporting cost documentation for site activities to be performed by ARCS or other contractors. The site activities could include RI/FS, removal actions, remedial design, and remedial construction. The cost estimating support can be for either the initial contractor assignment or modifications or change orders. These estimates and documentation would be developed to support EPA in determining Independent Government Cost Estimates (IGCE) for contractor activities.
2. Provide remedial design reviews for ARCS and other EPA contractor design products. These reviews can be at traditional design completion phases (30, 60, 90 percent or final design products ) or at any point that EPA requests. These reviews can also be conducted for biddability, constructibility, operability (BCO) of remedial designs.
3. Provide value engineering (VE) support requested by EPA. This support can include reviews of VE products and activities performed by EPA contractors or conducting the VE process for a remedial design being developed by and EPA contractor.
4. Provide support to EPA for remedial action and removal action activities conducted by EPA contractors. The support can include field oversight, inspection services, small waste disposal services, and technical review and cost estimating for contract change orders.
5. Provide limited real estate technical assistance and design support activities for EPA. This could include providing a Real Estate Planning Report (REPR) and supporting other limited real estate support and property acquisition activities. For sites where major real estate support is needed, it should be include as part of a USACE design IAG or, in some limited cases, a site-specific IAG just for the real estate support.
6. Field visits to observe significant contractor activities. For example, field tests or major drilling or geophysical operations.

C. Other Technical Assistance and Design Support

1. Provide training or seminars for EPA personnel. Example topics could be value engineering, design review process, field oversight, or construction contracting.

2. Provide topographic mapping support. The USACE generic IAG manger will coordinate any Region VIII requests with applicable USACE topographic mapping support sources and advise the Region on the options available.
3. Provide assistance to EPA at potentially responsible party (PRP) lead sites, including review of deliverables, site inspections, negotiations support, public meetings.
4. Provide assistance to EPA in evaluating potential response actions for sites not yet listed on the National Priorities List to help determine whether early action is appropriate, including collection and review of existing data, limited sampling, screening possible clean-up options, and costing out clean-up alternatives.
5. Collect information to supplement ongoing site evaluations at federal facilities where USACE is already on-site and where such information is critical to EPA's Hazard Ranking System data requirements.

### III. Work activation/authorization process

*Hazardous Toxic & Radioactive Waste Center of Expertise (HTRW-CX)*

This generic IAG will be executed between the EPA Region

VIII and the USACE ~~Missouri River Division (MRD)~~. ~~MRD will~~ *the HTRW-CX*

*will* retain the bulk funding for the IAG, but does not have the authority to obligate or expend any funds until EPA issues a Work Authorization Form (WAF). See attached. The EPA project officer (PO) will use the WAF to describe, define, authorize, and activate assignments. The WAF may indicate which USACE field office is being requested to perform the assignment. The WAF will be submitted to the ~~USACE MRD Resource Management Division~~ *HTRW-CX* for administrative and financial processing and acceptance by the USACE. Generally within one week of accepting the WAF, USACE will provide the PO an estimated start date for the project and the name of the project lead. For more urgent assistance needs, USACE will make every attempt to reprioritize its work in close coordination with the EPA PO to accomplish the urgent request.

### IV. USACE management and oversight

USACE will name a generic IAG Manager who will coordinate among the USACE offices. USACE will assure that a field office with the appropriate level of expertise will be assigned to accomplish the type of work required and that an appropriate project manager is assigned. The IAG Manager will be responsible for making sure the conditions in the IAG are being carried out consistent with the EPA/USACE MOU.



**USEPA REGION VIII  
WORK AUTHORIZATION FORM (WAF)  
U.S. ARMY CORPS OF ENGINEERS GENERIC INTERAGENCY AGREEMENT**

Date: \_\_\_\_\_

1. SITE NAME: \_\_\_\_\_
2. WAF ASSIGNMENT TITLE: \_\_\_\_\_
3. WAF ASSIGNMENT NUMBER: WAF(R8)-\_\_\_\_\_ 4. REVISION NO. \_\_\_\_\_
5. IAG NO.: \_\_\_\_\_
6. EPA SITE I.D. NUMBER: \_\_\_\_\_ 7. SITE/SPILL ID NO. \_\_\_\_\_
8. USEPA RPM/OSC NAME: \_\_\_\_\_ 9. PHONE: \_\_\_\_\_
10. PERIOD OF PERFORMANCE - FROM: \_\_\_\_\_ TO: \_\_\_\_\_
11. FUNDING:

WAF Assignment Funding	
Previous Funding	
Current Funding	
Total Funding	

12. SCOPE OF WORK: (Use additional sheets when necessary) Where appropriate, include recommendation for preferred USACE field organization to perform assignment.

### 13. PRIMARY CONTACTS

### 14. SCHEDULE FOR ASSIGNMENT ACTIVITIES AND DELIVERABLES: (Use additional sheets when necessary)

DELIVERABLES

DUE DATE

### 15. ACCOUNTING INFORMATION:

Accounting Information				
	DCN	S.F. Account Number	Object Class	Amount
Deobligate From				
Obligate To				

**AUTHORIZATION:** Authorization is hereby given to USACE to provide technical assistance work as provided for in the generic IAG and within the scope of work, budget, and schedule as described in this WAF. Sufficient funds are available in the generic IAG to support this WAF.

\_\_\_\_\_  
Regional Project Officer

cc:

Beverly Goodsell, 8PM-GAC

Jane Petering, EPA, Accounting Operation Office, Cincinnati

ATTACHMENT B  
Terms and Conditions for Technical Assistance

1. Cost Documentation Requirements

EPA acting as manager of the Hazardous Substances Superfund requires current information on CERCLA response actions and related obligations of CERCLA funds for these actions. In addition, CERCLA, as amended, authorizes EPA to recover from responsible parties all government costs incurred during a response action. In order to help assure oversight and successful recovery of CERCLA funds, both the Army Corps of Engineers and EPA have responsibilities under this agreement. The Army Corps of Engineers accounting system reports must be supported by site- and activity-specific cost documentation. The Army Corps of Engineers will organize and retain in a site file documentation of costs by site and activity (e.g. vouchers, billing statement, evidence of payment, audit reports) as follows:

a. Direct Costs

- \* Payroll - timesheets or timecards to support hours charged to a particular site, including the signature of the employee and/or the employee's supervisor. However, any subsequent revision to the time sheets must be signed by both the employee and the employee's supervisor.
- \* Travel - travel authorizations (including purpose of trip), local travel vouchers, traveler's reimbursement vouchers, carrier bills (including airline tickets), government owned vehicle bills, appropriate receipts for hotel, car rental, etc., proof of payment. Proof of payment is satisfied by providing a copy of the accomplished SF1166 "Voucher and Schedule of Payment" or equivalent.
- \* Contractor services - copies of contracts, requests for proposals (RFPs), detailed evaluation of contractor bids, contractor invoices, USACE project officer approval of invoices, proof of payment. Proof of payment is satisfied by providing a copy of the accomplished SF1166 or equivalent.
- \* Supplies and Equipment - EPA authorization to purchase non-expendable property of \$1,000 or more, vendor invoices, proof of payment, and hourly records of equipment use, when applicable.



- \* Any other direct costs not included in the above categories.

b. Indirect Costs

If indirect costs are not calculated by Army Corps of Engineers accounting system, a worksheet showing calculations of indirect costs charged to site(s) will be retained.

Under this IAG, the Army Corps of Engineers certifies: 1) that any indirect costs included in billings to EPA represent, in accordance with GAO principles, indirect costs that would not have been otherwise incurred by the Army Corps of Engineers, or 2) that explicit Congressional authority exists for charging other than incremental costs of performance.

2. Reporting Requirements

- a. The Army Corps of Engineers will provide monthly progress reports to the Regional Project Officer containing:
  - \* Site name and IAG number.
  - \* Summary of work performed.
  - \* Estimate of the percentage of project completed.
  - \* Accounting of funds expended during the reporting period and on the project to date, which includes budget category cost breakdown (See Item 22, page 2).
  - \* Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period.
  - \* Summaries of all problems or potential problems encountered during the reporting period.
  - \* Projected work for the next reporting period.
- b. The Army Corps of Engineers will submit a completed and signed Request for Reimbursement (SF1080) and a copy of the monthly progress report to the EPA Financial Management Center, Cincinnati, containing, as appropriate, USACE costs by budget category identified by the site, site-specific account number, and IAG number.

- c. The Army Corps of Engineers will provide a final inventory of property, within 30 days of project completion, describing the condition of each item and requesting disposition instruction. If the duration of the project is greater than one year, Army Corps of Engineers will provide an annual inventory of all property acquired by or furnished to the Army Corps of Engineers with EPA funds.

### 3. Cost Recovery

In the event of a contemplated cost recovery action, the Army Corps of Engineers will provide to EPA or the Department of Justice (DOJ) a cost documentation package detailing site-specific costs and including copies of the back up documentation. In some cases, these requests from EPA or DOJ may require that this documentation be provided in less than thirty days. If additional time is required to comply with a request, Army Corps of Engineers will negotiate with EPA or DOJ a schedule for responding. Army Corps of Engineers will provide EPA with a contact for obtaining necessary site-specific accounting information and documentation.

### 4. Record Retention Requirements

The Army Corps of Engineers and its contractors will retain the documents described in these "Terms and Conditions" for a minimum of ten years after transmission of a final billing for a site or sites, after which the Army Corps of Engineers and its contractors must obtain written permission from the appropriate regional award official before disposing of any of the records.

### 5. Audits

- a. Certain agencies are required by CERCLA, as amended, to perform annual audits of transactions involving the Superfund. The Army Corps of Engineers may also be required to perform annual audits. Cost documentation information must be available for audit or verification upon request of the Corps of Engineers Inspector General.
- b. If an audit determines that any direct or indirect costs charged to EPA are unallowable, EPA will be notified by the Army Corps of Engineers immediately following the resolution of the audit and be credited with those costs.

### 6. Minority Business Utilization

As a recipient of monies under this IAG, the USACE must

ensure to the fullest extent possible that at least 8% of funds for prime or subcontracts for services are made available to businesses owned or controlled by socially and economically disadvantaged individuals, women-owned businesses, and Historically Black Colleges and Universities. (Required in EPA's Appropriation Act, P.L. 101-507, revised 1993).

The USACE must submit a report to EPA showing the total extramural funds awarded and the amount and percentage of extramural funds awarded by November 15 of each year. Reports should be submitted to:

Office of Small and Disadvantaged Business  
Utilization (A-149C)  
U. S. Environmental Protection Agency  
401 M. Street, S.W.  
Washington, D.C. 20460

## 7. Other EPA Involvement

- a. ~~Payment to USACE contractors is contingent upon receipt of a USACE certified payment request.~~ Reimbursement to USACE for in-house costs is contingent upon receipt of a USACE certified reimbursement request (SF 1080). Final project payments for specific contracts and in-house costs shall be reviewed and approved by the EPA Regional program office.

EPA will hold title to all property acquired with Superfund monies. EPA will provide Army Corps of Engineers with property disposal instructions upon termination of the IAG and receive fair-market value for any property disposed of or used for non-superfund activities.

## **Appendix 4 - SMR Handouts and Presentation Materials**



# EPA SUPERFUND PROGRAM FINANCIAL STATUS



- Projecting \$300M New Funds, Obligations, and Expenditures.
- Projecting 400 FTE. Have excess allocation if needed.
- M&S - Updating remainder of FY99 requirements for IAG amendment before May 1999.
- CEFMS - All USACE is on. 3011a is main report used by CEMP-RS.
- PROMIS - All work is to be entered. Guidance was sent to field last week for environmental projects.
- Divisions are to actively participate in quarterly PRBs.
- CMR is quarterly. Baseline is an annual requirement before end of first quarter.



US Army Corps  
of Engineers



**Access to USACE**  
**Generic/ Blanket IAGs**  
**for**  
**EPA/USACE SMR**  
*January 1999*

Gregory Herring (402) 221-7712

1

*What Is a Generic IAG ?*

---

- Pre-approved Agreements between EPA and USACE for smaller short term assignments.
- Pre-approved Funds
- Similar to a Indefinite Delivery Contract
- EPA Project Officer Issues Task Orders
- Quickest Way to Access USACE

2

## *Quickest Way to Access USACE*

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- Site Specific Technical Assistance IAG
  - Turnaround Time: 3 Weeks to 6 Months
  - Size: \$50K to \$300K
- Generic IAG (Fastest)
  - EPA Reg 5 has been In-place Since 1993
  - Turnaround Time: < 1 Week
  - Size: \$5K to \$60K
  - 52 Assignments

3

## *Types of Generic IAGs and who has them*

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- Technical Assistance
  - EPA Regions 2, 3, 4, 5, 8 & 9
- Rapid Response
  - EPA Regions 5, 6 & 8

4

## *Types of Technical Assistance Tasks*

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- Technical Assistance Generic IAG
  - Cost Estimate Review/ Development
  - Removal Oversight
  - Document Review
  - Real Estate Support
  - Contracting Officer Technical Rep (COTR)
  - Project Planning/ Background Review
  - 5 Year Reviews

5

## *Types of Rapid Response Tasks*

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- Rapid Response Generic IAG
  - Project Planning/ Background Review
  - Pre-Scoping Site Visit w/ Contractor
  - Scope/ Negotiate Delivery Order
  - Award Contract

6



## *Types of Technical Assistance Tasks (cont)*

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- Projects:
  - Greiner's Lagoon - Fremont, OH (John O'Grady)
    - EE/CA Review
  - Mid-States Landfill - Central, WI (Jeff Heath)
    - 5 Year LF Review
  - NW Mauthe - Appleton, WI (Jon Peterson)
    - Cost Estimate/COTR
  - Winston-Thomas - Bloomington, IN (Alex Tzallas)
    - Berm & Tank Integrity Assessment

7

## *Technical Assistance Process*

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- Call Project Officer (G G Waters)
- Fill Out 2-Page Form
  - General Scope of Work
  - Schedule for Assignment Activities & Deliverables
  - Funds
- Assign Tasks
- Report/Task Duration
  - 2-Weeks to 1-Year

8

# Recycling Superfund Sites

## Introduction

Traditionally, the Superfund program has focused on the timely and efficient assessment, investigation, and remediation of hazardous waste sites. Since the program's inception in 1980, EPA has evaluated more than 40,000 sites, conducted close to 5,000 removals, and completed remedy construction at more than 550 of the nation's worst contaminated properties, the National Priorities List (NPL) sites. Over the past 18 years, however, the Agency has become increasingly aware that Superfund's benefits will not be fully realized until cleaned sites are returned to productive use.

Although more than 100 NPL sites and an unknown number of sites with major removal actions are currently in some form of productive use, these reuse successes have occurred without a nationally coordinated effort by EPA. To augment the value of the Superfund program, the Agency is interested in more actively fostering the return of once-hazardous properties to productive use. EPA is conducting detailed analyses of more than 40 sites to gain insight into the reuse process. The Agency is also working to communicate the benefits of reusing Superfund sites, such as an improved local economy and an enhanced quality of life for residents in surrounding communities. By encouraging the "recycling" of hazardous waste sites and implementing remedies that promote site reuse, EPA is helping to convert once blighted properties into valuable assets for the community, whether as commercial businesses, recreational areas, or ecological enhancements, such as wetlands. Through this effort, EPA contributes to the positive economic, environmental, and social impacts that result from site use. At the same time, citizens can be more certain that appropriate reuse helps to ensure long-term effectiveness of the remedy.

## What is the Recycling Superfund Sites Project?

EPA's efforts to develop a coordinated program to foster the reuse of Superfund sites is known as the Recycling Superfund Sites Project. This project reflects the Agency's philosophy that EPA has a responsibility to citizens not only to clean up contaminated properties in a manner that protects human health and the environment, but also to encourage beneficial uses of those properties. The project is evaluating a variety of objectives and activities, including:

- making consideration of site reuse an EPA priority
- developing a more sophisticated reuse assessment process to use at NPL and major removal sites
- developing a site management process and tools for facilitating reuse
- continuing to streamline enforcement approaches to foster property reuse
- communicating to stakeholders that sites are safe
- sharing lessons learned from sites in reuse.

Recycling of Superfund sites focuses on the reuse of sites to produce economic, environmental, and social benefits for the surrounding communities. EPA does not favor one type of reuse or benefit over another – land use is a local decision. For instance, the local community

must determine the relative desirability of reusing a Superfund site as a commercial enterprise with positive economic impacts, developing a recreational area with social benefits or creating wetlands on the site with ecological benefits.

### **EPA Activities Prior to the Project**

Prior to the Recycling Superfund Sites Project, EPA supported the reuse of hazardous waste sites in a variety of ways. This included removing more than 30,500 sites from the inventory of properties investigated under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). These sites, at which EPA planned no further Superfund action, were removed from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) inventory, thus reducing the stigma on these properties. In another example, EPA Regions have been authorized to identify areas on or adjacent to NPL sites which are uncontaminated and to communicate the availability of these properties to the public in an effort to return these uncontaminated areas to productive use.

On many occasions, EPA Regional staff have worked closely with local stakeholders, including elected officials, community planners, residents, and developers, to factor redevelopment plans into cleanup remedies. For example, Regional personnel have incorporated plans for future buildings or contours for a future golf course into engineering designs at sites. Similarly, EPA has actively supported the return of Superfund sites to other types of productive use, such as softball fields or tree groves.

Because CERCLA liability is a major concern for potential purchasers or developers of Superfund sites (especially NPL sites), EPA also provides some opportunities for liability protection. The Agency has issued guidance that clarifies the liability of prospective purchasers, lenders, property owners, and others regarding their association with, and activities at, a site. Some of the relevant guidance documents are:

- *Guidance on Agreements with Prospective Purchasers of Contaminated Property*
- *Policy on the Issuance of Comfort/Status Letters*
- *Policy on CERCLA Enforcement Against Lenders and Government Entities that Acquire Property Involuntarily*

### **Current Recycling Superfund Sites Activities**

Widespread interest in the Brownfields Project and increasing evidence that many Superfund sites have been reused for a variety of environmental, recreational, and commercial applications, has led EPA's Office of Emergency and Remedial Response (OERR) to focus on a more concerted effort to promote the return Superfund sites to productive use. In FY98 the Agency began a series of activities that formed the basis of the Recycling Superfund Sites Project, including analyzing the beneficial uses of specific Superfund sites following cleanup, communicating such benefits to internal and external audiences and working with stakeholders to find ways to foster productive use of sites. Specific activities that EPA has taken to date include:

- *Site-Specific Benefits Analysis.* EPA is analyzing the economic impacts and environmental and social benefits associated with the redevelopment, reuse, and/or continued use of more

than 100 Superfund sites. The Agency has developed and peer reviewed methods for calculating short- and long-term jobs, income, expenditures and tax revenues resulting from the redevelopment, reuse, or continued use of each Superfund site. EPA is also developing or improving methodologies for estimating economic impacts associated with uses of remediated ground water, agricultural lands and other resources. Efforts are also underway to develop more estimates of how the cleanup of Superfund sites affects property values, as well as methods to better characterize ecological benefits.

- **Communications Activities.** EPA is communicating the benefits stemming from the reuse of specific Superfund sites to various Superfund program stakeholders through fact sheets, the Internet, posters, conferences and other outreach materials. The centerpiece of this communications effort is the fact sheet series entitled *Returning Superfund Sites to Productive Use*. These four- to eight-page documents summarize EPA's success in working with others to reuse Superfund sites following cleanup, and provide quantitative and qualitative estimates of the economic, environmental and social benefits that result. The Agency has released nine site-specific fact sheets that describe the successful reuse of Superfund sites, which can be found on the Superfund Web page (see [www.epa.gov/superfund/accomp/redevel/](http://www.epa.gov/superfund/accomp/redevel/)). The Agency expects to produce another 40-50 of these fact sheets in FY99.
- **FY98 Stakeholder Forum.** In September 1998, EPA held a stakeholder forum in Chicago, Illinois, to share experiences and solicit ideas about Superfund site reuse or redevelopment activities, as well as to examine and discuss how EPA can improve its policies and practices to encourage reuse of Superfund sites. Participants included representatives from State, Tribal, and local governments; non-governmental organizations, including community-based organizations and citizen groups, and the business community, which have experience in redeveloping or reusing Superfund sites; EPA Regional staff who have been involved in the redevelopment and reuse of Superfund sites, including site managers, community involvement coordinators, enforcement staff, and managers; and EPA Headquarters and other Federal agency staff who may be involved in implementing new projects or ideas resulting from the forum.

## **Future Recycling Superfund Sites Activities**

The continued development of the Recycling Superfund Sites Project has been identified as an EPA/OERR priority for FY99. While the activities discussed above will continue in FY99, EPA understands that it needs to conduct more detailed analyses to decide whether changes to the policies and practices of the Superfund program would foster greater reuse of Superfund sites. The Agency is conducting or considering several new efforts to promote the site reuse, including:

- **Trends Analysis.** EPA is developing a database of information for sites that have been successfully returned to productive use. The Agency is collecting site-specific information to populate the database and will begin analyses to identify possible reuse trends. Initial analyses will focus on trends involving remedy selection and post-cleanup reuse.
- **Statutory and Policy Analyses.** EPA will conduct a variety of analyses to: (1) evaluate and determine the adequacy of existing program policy and guidance, and (2) ensure that any

policy changes are consistent with the authority provided under CERCLA and the National Contingency Plan (NCP).

- *Redevelopment/Reuse Analyses.* To ensure the success of the Project, EPA will undertake a variety of analyses to gain a better understanding of how reuse occurs at the site-specific level, who the key players are, and what Agency actions can promote or hinder the redevelopment process. The specific types of analysis that EPA may undertake include:
  - (1) Continuing to identify and select for detailed analyses Superfund sites that reflect the diverse site types and development situations (e.g., urban versus rural, commercial versus ecological, etc.);
  - (2) Analyzing redevelopment/reuse processes, including interviewing and working with developers and other stakeholders at the local level to better understand these processes from beginning to end;
  - (3) Analyzing site types for potential reuse/redevelopment activities in order to develop "presumptive reuse" scenarios; and
  - (4) Analyzing the experience of other departments or agencies (e.g., DoD's experience with respect to Base Realignment and Closure (BRAC) sites) to apply their lessons learned to the Recycling Superfund Sites Project.
- *Communications Activities.* A variety of communications tools will be needed to educate the public, provide information to Congress, and generally promote the redevelopment and reuse of Superfund sites to all stakeholders. Communication of the Recycling Superfund Sites Project is in its infancy, but is expanding due to increased interest in putting formerly contaminated properties back into productive use. Specific activities for FY99 are not yet scheduled, but may include holding additional stakeholder forums on specific reuse issues.
- *Project XL.* EPA announced in the *Federal Register* that as part of Project XL (eXcellence and Leadership), the Agency would consider offering procedural flexibility in addressing potential Superfund liability to facilitate reuse of cleaned-up NPL sites. EPA also offers technical expertise to support local efforts, advice in involving the community, and coordination of access to other agencies and resources. EPA is willing to consider changes to its existing policies, procedures, and guidance in order to minimize or eliminate, where appropriate, barriers to the reuse of cleaned up NPL sites.

# RECYCLING SUPERFUND SITES FACT SHEETS

The general screen for the Recycling Superfund Sites fact sheets can be found at :  
<http://www.epa.gov/superfund/accomp/redevel/>

URL's for specific fact sheets are listed below:

- ▶ **Luminous Processors** is located at <http://www.epa.gov/superfund/accomp/redevel/lumin.htm>
- ▶ **Industri-Plex** is located at <http://www.epa.gov/superfund/accomp/redevel/plex.htm>
- ▶ **Raymark Industries** is located at <http://www.epa.gov/superfund/accomp/redevel/raymark.htm>
- ▶ **Bangor Gas Works** is located at <http://www.epa.gov/superfund/accomp/redevel/bangor.htm>
- ▶ **General Mills** is located at <http://www.epa.gov/superfund/accomp/redevel/genmills.htm>
- ▶ **Anaconda Smelter** is located at <http://www.epa.gov/superfund/accomp/redevel/anaconda.htm>
- ▶ **Chisman Creek** is located at <http://www.epa.gov/superfund/accomp/redevel/chisman.htm>
- ▶ **Fort Devens** is located at <http://www.epa.gov/superfund/accomp/redevel/devens.htm>
- ▶ **Denver Radium** is located at <http://www.epa.gov/superfund/accomp/redevel/denver.htm>



# Returning Superfund Sites To Productive Use

Luminous Processors  
Athens, Georgia

## BEFORE

Radioactive waste site from the manufacture of luminous watch and clock dials.

## AFTER

McDonald's fast food restaurant and outdoor children's playground.

## IMPACT

Local jobs and income, increased property values, increased public revenues.



McDonald's opens their restaurant on the former Luminous Processors site, taking advantage of the high commercial growth occurring in the area.

If you drive today along the Atlanta Highway on the outskirts of Athens, Georgia, there are no signs that a radioactive hazardous waste site once blighted the landscape. What you see instead is an abundance of commercial activity, including shopping malls, gas stations, and restaurants. In fact, a McDonald's restaurant currently sits on top of the former hazardous waste site called the Luminous Processors Superfund site. As it does with many contaminated sites across the country, EPA cleaned up the property to enable redevelopment to occur. What follows is the story of how EPA worked with the community and the State of Georgia to return this property to productive use, and the economic, environmental, and social impacts that have resulted.

## Site Snapshot

From 1952 to 1978, Luminous Processors operated its manufacturing facility on a 1-acre site alongside Highway 78, the Atlanta Highway. The company made glow-in-the-dark watch and clock dials, popular and useful household items. But the dials glowed because they were painted with radioactive isotopes. When Luminous Processors abandoned the site in 1980, the company left behind not only an empty building, but also soil contaminated with high levels of radioactive waste.



## Before



Source: Georgia DNR

Using funds from the Superfund, workers from the State of Georgia clean up the radioactive contamination at the site in 1982.

### PROBLEM

- Soil contaminated with radium-226 and tritium.
- Buildings and debris contaminated with radioactive waste.

### SOLUTION

- 18,000 cubic feet of contaminated soils excavated.
- Contaminated buildings and debris removed.
- Site backfilled with clean soil and grass planted.
- Fence and warning signs installed.

### PARTNERS

- U.S. EPA
- Georgia Department of Natural Resources
- Local Community
- McDonald's

## From Radiation . . .

In 1981, EPA placed the Luminous Processors property on its list of high-priority Superfund sites. Shortly after its listing, EPA awarded funds to the State of Georgia for the cleanup of the site. With this assistance, workers were able to remove contaminated soil and hazardous waste and debris from the property. They also backfilled excavated areas with clean soil, seeded the areas with grass, and fenced in the property. The entire cleanup was completed in only five months, and in December, 1982, the site was deleted from EPA's Superfund site list. What had once been a 1-acre patch of radioactive waste was now a grassy site ready for new construction.

## . . . To Redevelopment

While the Luminous site was being cleaned up, developers were building the Georgia Square Mall, an 830,000-square-foot shopping center, across the street. This and other commercial growth in the area attracted the attention of the McDonald's Corporation, which saw a potential market in the large number of hungry shoppers being drawn to the mall. McDonald's purchased the Luminous property in 1990 and built a restaurant, complete with an outdoor playground. Because EPA's cleanup was so thorough,





Source: U.S. EPA

*After*

A McDonald's fast food restaurant and playground now occupies the former hazardous waste site, providing many positive benefits to the community.

McDonald's was able to redevelop the property without liability concerns. In fact, so complete is the transformation that few people today realize that the property was once a radioactive waste site.

## *Community Benefits*

The replacement of a dangerous eyesore with a successful restaurant has had an enormous impact on the surrounding community. The rapid and successful cleanup of the Luminous Processors property has ensured the protection of human health and the environment, while the restaurant itself has provided local jobs and revenue. With a thriving business replacing an abandoned, contaminated factory, property values at and around the site have also increased. The aesthetic improvements and the commercial vitality of the area continue to attract new businesses, bringing further economic and social benefits to the community.

## *Keys to Success*

EPA's partnership with the State of Georgia and the local community was key to the successful redevelopment of the Luminous Processors site. This cooperation was crucial to developing a cleanup plan that satisfied everyone's concerns. Community members had input into EPA's and the State's redevelopment planning as well. The site's comprehensive cleanup minimized potential liability concerns, making the property suitable for redevelopment at a critical time when other development was occurring in the surrounding area. This cooperative effort among EPA, the State, the local community and corporate interests is bringing positive results to the local economy, the environment, and area residents today, and will continue to do so for years to come.

### **POSITIVE ECONOMIC IMPACTS**

#### *Short-Term Jobs*

- 38 short-term jobs during five months of cleanup
- \$920,000+ in annual income resulting from short-term cleanup jobs

#### *Long-Term Jobs*

- 26 permanent/full-time jobs with McDonald's
- \$430,000 in total annual income and \$340,000+ in spending resulting from permanent jobs

#### *Public Revenue*

- \$55,000+ in sales tax revenue at the McDonald's
- \$15,000 in state income tax for permanent jobs

#### *Property Value*

- \$460,000 increase in property value
- Roughly \$480,000 potential increase in residential property values within 2 miles of site

### **ENVIRONMENTAL & SOCIAL BENEFITS**

- Public health in busy commercial region protected
- Spread of radioactive contamination to surrounding areas prevented
- Attraction of new businesses to the area continued
- Aesthetic quality of area due to landscape improvement enhanced
- New playground for children constructed

1. Atlanta Highway
2. Future location of Georgia Square Shopping Center

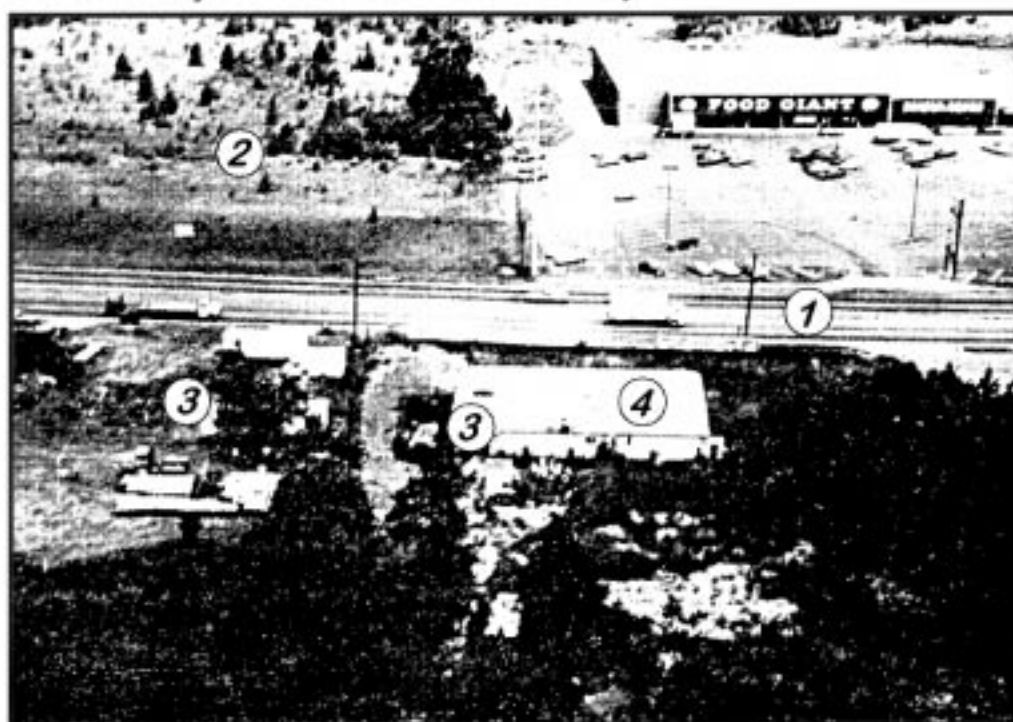
### 3. Location of Cleanup Actions

- Exposure to contamination eliminated
- Protection of nearby residents, workers, and shoppers
- Short-term cleanup jobs and income

### 4. Location where McDonald's constructed

- Productive use of formerly-contaminated property
- Permanent jobs, income, and tax revenues
- Increase in property values of site and surrounding area
- Attraction of new businesses to the area

## Cleanup and Redevelopment



The Luminous Processors site, seen here in 1982 prior to cleanup, and the surrounding area have been transformed following tremendous commercial growth along the Atlanta Highway.

## Want to Know More?

The Technical Appendix to this fact sheet provides detailed information on the economic impacts associated with this site, including the specific calculations used, sources of information, and possible limitations associated with the calculations. To obtain copies of the Technical Appendix for this fact sheet, or to learn more about the economic analyses performed for this site or other Superfund sites, please write to [reuse.info@epa.gov](mailto:reuse.info@epa.gov) or contact:

**John Harris, Senior Advisor for Economics,**  
Office of Emergency and Remedial Response  
U.S. Environmental Protection Agency  
(703) 603-9075

**Melissa Friedland**  
Office of Emergency and Remedial Response  
U.S. Environmental Protection Agency  
(703) 603-8864

For more information about the cleanup and redevelopment of the Luminous Processors site, contact:

**Georgia Natural Resources Department**  
Hazardous Waste Corrective Action Division  
205 Butler Street, Suite 1154  
Atlanta, GA 30334  
(404) 657-8600

To see this fact sheet, or similar fact sheets showing how Superfund sites have been returned to productive use, visit our web site at: <http://www.epa.gov/superfund/accomp/redevel/>



# Raymark Industries Recycling Superfund Sites *Stratford, Connecticut*

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If everything goes according to plan, in the near future the Raymark Shopping Center will be open for business. It's hard to

believe that just a few years ago the Raymark site and the surrounding rivers and creeks were almost cordoned off because of extensive pollution. Due to the hard work of EPA who

cleaned the site and a local developer who decided to build a mall on the premises, this former eyesore is on verge of a major rebirth. Future store owners imagine shoppers eagerly snapping up their goods and local politicians foresee the mall providing a major boost to the local economy. Although the final plans for the mall are still under development, recreational and commercial use of the surrounding waterways abound. Just a stone's throw away from the proposed site, oyster boats ply the waters of the Housatonic River in search of Long Island's famous oysters, and recreational fisherman throw out crab lines in nearby Ferry Creek.



From 1919 to 1989, Raymark Industries produced an extensive line of automotive parts and products, including brake pads and clutch parts. During its 70 years of operation, Raymark generated wastes that contained lead, asbestos, and hazardous chemicals. A routine site investigation by EPA in 1993 uncovered massive amounts of contamination that posed a serious threat to human health and the oyster beds of the nearby Housatonic River.

Soon after discovery of the contamination, EPA teamed up with the Connecticut Department of Environmental Protection (CTDEP) to remove waste, demolish buildings that had become contaminated, and lay down a protective cap over the polluted areas. While cleanup was underway, EPA was approached by Leach

Family Holdings, a local developer, who wanted to redevelop the site into a 300,000 square foot retail shopping complex. After getting approval from the local community, EPA agreed to place steel pilings into the cap to support the weight of a mall. This decision led to one of the first instances in EPA's history, where redevelopment plans were incorporated into the cleanup plan.

The strong partnership forged among EPA, CTDEP, and Leach Family Holdings is expected to have a positive effect on the local community. In particular, the mall is expected to generate significant revenue and support hundreds of jobs. The cleanup of the property also ensured future use of local waterways by both commercial and recreational fisherman.

If you would like to learn more about EPA's efforts to promote the redevelopment or reuse of Superfund sites, please write to [reuse.info@epa.gov](mailto:reuse.info@epa.gov), or call Melissa Friedland at (703) 603-8864 or John Harris at (703) 603-9075.

To see more examples of Recycled Superfund sites, please visit EPA's home page at:  
[www.epa.gov/superfund/accomp/redevel/](http://www.epa.gov/superfund/accomp/redevel/)



# Anaconda Smelter Recycling Superfund Sites *Anaconda, Montana*

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**S**ituated on a portion of the Old Works/East Anaconda Smelter Superfund site is a unique, 21-hole golf course that combines beautiful landscaping with historic mining artifacts. That's how golfing legend Jack Nicklaus designed the golf course. Bunkers are made of slag and golfers play beside old smelting ladles and chip in sight of flues and smelting ovens. This unusual course is part of the dramatic transformation of the Anaconda Smelter Superfund site in Anaconda, Montana. What was once a hazardous waste site is now the centerpiece of the town's plans to change itself from a former mining town to a recreational hot spot.



Anaconda Smelter first began operations in 1884. The smelter employed thousands of people and, as in most mining towns, was the backbone of the local economy. The smelter earned a national reputation as one of the leading producers of copper. Unfortunately, the success of the smelter resulted in widespread environmental contamination. By the time the smelter closed in early 1980, it left behind over a century's worth of contamination—over 1.4 million cubic yards of soil, slag, and flue dust contaminated with heavy metals such as arsenic, cadmium, copper, lead, and zinc.



After discovering the contamination at the site, EPA worked closely with the property owners (ARCO), the community, and Deer Lodge County officials to develop a cleanup plan that not only protected people and the environment, but also allowed for redevelopment of the site. What was unveiled in 1994 was a cleanup plan that included designing a top-notch golf course over a portion of the site. In particular, the cleanup involved placing a 20-inch thick soil cap over the contaminants, revegetating and landscaping the area, and installing a state-of-the-art drainage system.

The strong partnership forged among EPA, ARCO, and the local community was the key ingredient to the successful turnaround at the site. EPA, ARCO, and the local community played an active role in planning the cleanup and redevelopment. EPA also orchestrated an agreement that addressed the liability concerns that ARCO and the county had at the site, while ensuring future protection through maintenance of the soil cover. In addition, Deer Lodge County agreed that all revenues from the golf course not used to cover operating expenses would support the community's efforts for historical preservation of the site and surrounding areas.

If you would like to learn more about EPA's efforts to promote the redevelopment or reuse of Superfund sites, please write to [reuse.info@epa.gov](mailto:reuse.info@epa.gov), or call Melissa Friedland at (703) 603-8864 or John Harris at (703) 603-9075.

To see more examples of Recycled Superfund sites, please visit EPA's home page at:  
[www.epa.gov/superfund/accomp/redevel/](http://www.epa.gov/superfund/accomp/redevel/)





# Denver Radium Site

## Denver, Colorado

### *A Superfund Redevelopment Success*

#### Denver Radium At a Glance

**Problem:** Contamination of soil resulting from radium processing and other industrial activities.

**Solution:** Excavation of soils, demolition of buildings, and off-site disposal of radioactive materials; construction of a soil cap over metal-contaminated soil; and restrictions on future land and groundwater use.

**Redevelopment:** Partnership formed among EPA, Colorado Department of Public Health and Environment, and Home Depot USA, Inc., resulting in the construction of a 130,000 square foot retail sales facility on the site.



Source: U.S. EPA

*A portion of the Denver Radium Superfund site has been cleaned up and returned to productive use with the construction of a Home Depot store.*

As part of the Superfund program, EPA is entering into partnerships with States, local governments, and private developers to clean up and return hazardous waste sites to beneficial uses for the community. The Denver Radium Superfund site, a former radium processing plant located in Denver, Colorado, demonstrates how EPA's Superfund program has returned the land to economic usability. Once a contaminated property that threatened human health and the environment, a portion of the Denver Radium site has become a major commercial business establishment providing jobs, income, and other short- and long-term economic impacts. This document describes the cleanup and redevelopment of a portion of the Denver Radium Superfund site, and provides estimates of the positive economic impacts and environmental and social benefits that have resulted at and around the site.

## Site Snapshot

The Denver Radium Superfund site consists of many properties located throughout the Denver, Colorado area. This fact sheet addresses just one of the properties located in downtown Denver, south of the central business district. The properties bordering the site are primarily commercial and industrial. The nearest residential property is located several blocks east, and there are over 86,000 households within two miles of the site. The site lies 1,000 feet from the South Platte River within the Platte River Valley.

The Denver Radium site is a legacy of our country's early efforts to produce radium domestically. In the early 1900s, the U.S. Bureau of Mines and the National Radium Institute entered into an agreement to develop and operate a radium processing plant in Denver, Colorado. Denver was selected as the location for the plant because

of the abundance of carnotite, a radium-bearing ore found in the Colorado Plateau.

By the late 1920's, the plant closed and left the properties contaminated with radioactive soil and debris. As property ownership, industrial activities, and land use changed, radioactive by-products were often left in place, used as fill or foundation materials, or otherwise mishandled. These by-products contained such contaminants as radium-226, arsenic, zinc, and lead.

In the 1940s, the Robinson Brick Company (ROBCO) purchased the original plant, which consisted of 17 acres of land. ROBCO used the property as a brick and tile manufacturing facility until the mid-1980s. This portion of the site contained both radioactive and metals contamination. A railroad right-of-way owned by the Denver and Rio Grande Western Railroad was also located on the property.



*The former ROBCO-owned portion of the Denver Radium site is located near the South Platte River to the south of Denver's commercial business district.*

## Cleanup

In September 1983, EPA added the Denver Radium site to the Superfund National Priorities List—the Agency's list of priority hazardous waste sites needing cleanup. After conducting detailed investigations and soliciting community input, EPA, with concurrence from the State, unveiled a plan to clean up the contamination at the site. Beginning in 1988, EPA excavated almost 97,000 tons of radioactive soil and materials, demolished and removed radium-contaminated buildings, and shipped the contaminated materials to an EPA-approved facility equipped to handle radioactive wastes.

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**"While still cleaning up the contamination, we'll replace a no-man's land with a thriving business."**

*—Gale Norton, Attorney General  
for the State of Colorado*

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During the cleanup of the radioactive contamination, EPA uncovered soil that was contaminated with heavy metals. To address this problem, EPA developed another cleanup plan that included covering the metal-contaminated soil with a protective cap to limit exposure to the contamination and prevent the metals contamination from migrating. This cleanup plan was designed specifically to allow the property to be used for commercial purposes. With the goal of redeveloping the site, Home Depot USA, Inc., approached EPA and the State of Colorado with a plan to purchase the property from ROBCO and assist in the cleanup of the heavy metals contamination.

## Redevelopment

In 1995, Home Depot USA, Inc., offered to buy the property from ROBCO in order to build a retail store as part of its home improvement supply business. The company also entered into a partnership with EPA and the State to assist in cleaning up the heavy metals contamination in exchange for a limitation on the company's liability for the contamination at the site. This partnership was formalized in a Prospective Purchaser Agreement, which established the legal conditions by which Home Depot would participate in the cleanup and included a covenant not to sue or take enforcement action against the company by EPA or the State.

As partners in the cleanup of the site, EPA was responsible for consolidating the heavy metal contamination on the site, and Home Depot was responsible for constructing and maintaining a protective cap over the contamination. Home Depot also agreed to add restrictions to the land deed that prevent the property from being used for residential purposes and restrict the use of groundwater for drinking water. With the agreement in place, Home Depot constructed the protective cap over the consolidated metals contamination and began redeveloping the property in 1995. The construction of the store, parking lot, outdoor garden and lawn area was completed and Home Depot opened for business by the end of 1996.

## Benefits

The partnership among EPA, the State, and Home Depot at the ROBCO portion of the Denver Radium site has had a positive effect on the local community. In particular,

the cleanup and redevelopment of the site have resulted in significant economic impacts, as well as environmental and social benefits. A summary of these benefits is provided below. Additional information on the calculations used to estimate the economic impacts is provided in the Technical Appendix to this fact sheet.

### ***Economic Impacts***

Redevelopment of the ROBCO portion of the Denver Radium site and the successful construction of the Home Depot retail facility have resulted in numerous positive economic impacts in the form of jobs and associated income and local spending. During the eight years of cleanup activities at the site, an average of 130 jobs were supported each year with an estimated total annual income of \$3.2 million. In addition, approximately 15 jobs were supported during redevelopment of the site, resulting in an estimated \$480,000 in income. The Home Depot store supports approximately

113 permanent jobs. The total annual income associated with these permanent jobs is estimated to be \$1.9 million, which is expected to result in personal spending of almost \$1.5 million.

The redevelopment of the site into a Home Depot also results in public revenue. For example, the Home Depot store is estimated to generate as much as \$1.25 million in State sales taxes each year. In addition, the income associated with the permanent jobs will result in approximately \$93,000 in State income tax, as well as over \$35,000 in State sales taxes resulting from purchases in the local economy made by the employees of the Home Depot store.

The cleanup and redevelopment of the site also has positive effects on property values at and around the site. For example, Home Depot purchased the property in 1995 for an estimated \$4.4 million; now, the property value has been assessed at \$6.4 million. In addition, the cleanup has led to an increase of up to \$65 million in total residential property values within 2 miles of the site.

### ***Environmental Benefits***

In keeping with EPA's mission, the primary benefit achieved through the cleanup of the ROBCO property is the long-term protection of human health and the natural environment. Radium presented a possible carcinogenic risk from contact with radioactive soils. The demolition and removal of contaminated buildings discouraged trespassing and removed the immediate risk of unsafe buildings. The permanent removal and proper disposal of the radium-contaminated buildings and soils eliminated the long-term risks of direct contact or ingestion by removing the source of the contamination.

#### **Positive Economic Impacts**

- An average of over 130 jobs per year supported during eight years of cleanup and an additional 15 jobs during redevelopment.
- \$3.2 million in annual income associated with cleanup jobs and \$480,000 in income associated with redevelopment jobs.
- 113 permanent jobs at the Home Depot store.
- \$1.9 million in annual income associated with permanent jobs resulting in almost \$1.5 million in personal spending.
- Over \$128,000 in State income and sales taxes associated with spending by permanent employees.
- As much as \$1.25 million generated in State sales taxes from purchases at the Home Depot store.
- \$2 million increase in assessed value of redeveloped property and up to \$65 million increase in residential property values within 2 miles of site.



## ***Positive Impacts from Denver Radium Cleanup and Redevelopment***

### ***Before Cleanup and Redevelopment***

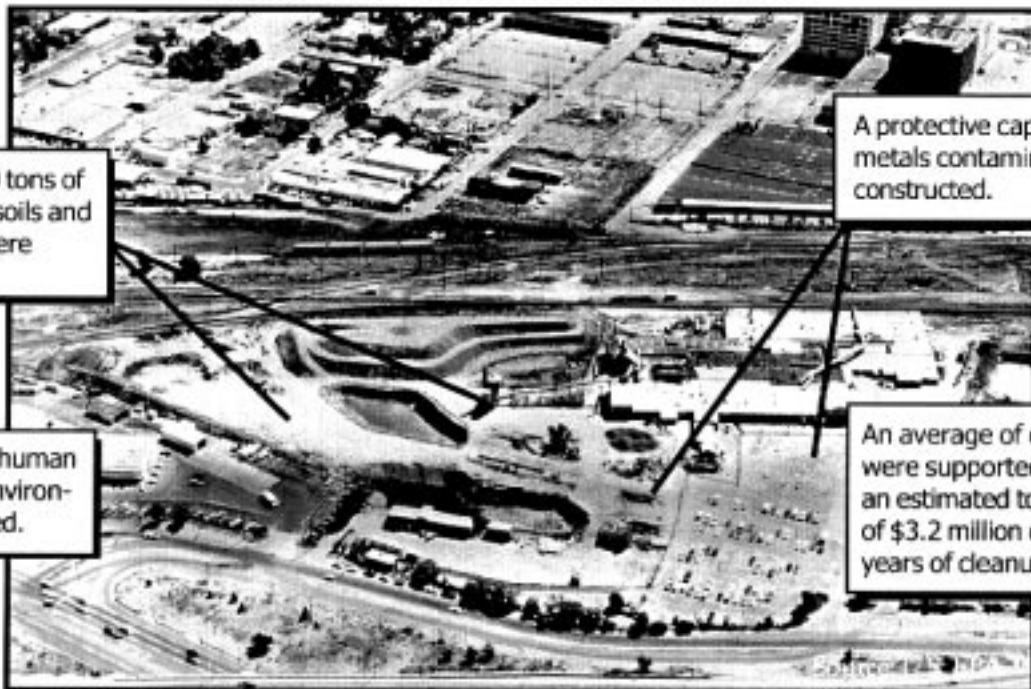
←  
Downtown  
Denver

Over 97,000 tons of radioactive soils and materials were removed.

Overall threat to human health and the environment was reduced.

A protective cap over heavy metals contamination was constructed.

An average of over 130 jobs were supported each year with an estimated total annual income of \$3.2 million during the eight years of cleanup.



### ***After Cleanup and Redevelopment***

More than 113 permanent jobs with a total annual income of over \$1.9 million associated with the Home Depot.

Up to \$128,000 in State income and property taxes associated with permanent on-site jobs.

Increased access to retail shopping and improved aesthetic quality to the area.

Up to \$1.25 million generated annually in State sales tax at the Home Depot.



Source: U.S. EPA

### **Environmental Benefits**

- Exposure to high levels of radioactive contamination eliminated.
- Threat of direct exposure to heavy metals contamination minimized.
- Migration of heavy metals contamination from the site prevented.
- Ongoing monitoring of the site to ensure continued protection of human health and the environment.

Heavy metal contaminants in the soil, such as arsenic, zinc, and lead, posed a potential threat of health problems associated with the circulatory system. EPA was able to minimize exposure to metal-contaminated soils by creating a hard, permanent barrier between the soils and workers and future visitors. Home Depot is monitoring the cap to ensure that it is structurally sound and that metals are not migrating off site. EPA is overseeing Home Depot's efforts, thereby ensuring continued protection of site visitors and the surrounding environment.

### ***Social Benefits***

At the Denver Radium site, the primary social benefit is the transformation of an abandoned, contaminated property into a retail shopping facility. Other social benefits for the Denver Radium site include intan-

gible community-based effects, such as the improvement in the aesthetic quality of the local landscape and an increased sense of civic pride associated with achieving the successful redevelopment of a Superfund site.

Redevelopment of the Denver Radium site provides local residents with new shopping opportunities, and serves as a magnet for regional consumers who patronize other commercial establishments in the area. Redevelopment of this former hazardous waste site also may encourage additional redevelopment in the area.

Home Depot provides a social benefit to the area by sponsoring local and regional community events and supporting many environmental, youth, and housing charities. Home Depot has received national recognition and numerous awards for providing outstanding examples of effective environmental solutions.

### **Social Benefits**

- Restored the land to a state of economic usability.
- Increased access to retail shopping.
- Improved the aesthetic quality of the area.
- Created an atmosphere conducive to additional redevelopment activity.

## For More Information

The Technical Appendix to this fact sheet provides detailed information on the economic impacts associated with this site, including the specific calculations used, sources of information, and possible limitations associated with the calculations. To obtain copies of the Technical Appendix for this fact sheet, or to learn more about economic analyses performed for this site or other Superfund sites, please contact:

John Harris, Senior Advisor for Economics,  
Office of Emergency and Remedial  
Response  
U.S. Environmental Protection Agency  
Mail Code 5204G  
401 M Street, SW  
Washington, DC 20460  
(703) 603-9075  
harris.john@epamail.epa.gov

For further information about the cleanup and redevelopment of the Denver Radium site, please contact the site manager:

Rebecca J. Thomas, RPM  
U.S. EPA - Region VIII  
999- 18th Street, Suite 500  
8EPR-SR  
Denver, CO 80202-2466  
(303) 312-6552  
thomas.rebecca@epamail.epa.gov

Economic impacts presented in this fact sheet represent positive local impacts occurring at and around the site. Available information does not allow a determination of whether or how many of the jobs associated with the cleanup and redevelopment are new. Consequently the economic impacts presented in this fact sheet are not "net" impacts. Although the redevelopment of the site also may generate other positive impacts throughout the rest of the economy, this analysis does not quantify these indirect effects or estimate any offsetting negative effects or costs.

Whenever information specific to the site was available, it was used. However, certain numerical estimates are, of necessity, based on general formulas rather than site-specific information and are, therefore, approximations. Although there may be uncertainty associated with many of these estimates, point estimates are used throughout the fact sheet. The economic impacts reflect the information available at the time of fact sheet development and may change over time. Monetary estimates are expressed in July 1997 dollars. Estimates of jobs associated with cleanup and redevelopment are presented as annualized values, reflecting the average number of jobs per year.



U.S. Environmental Protection Agency  
Mail Code 5201G  
401 M Street, SW  
Washington, DC 20460



# Lipari Landfill

## Recycling Superfund Sites

### *Mantua, New Jersey*

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**W**ith six playing fields, a nature trail, a paved and lighted parking lot, a recreational building, streams, marshes, and the beautiful Alcyon Lake, a visitor to the new Alcyon Park near the communities of Pitman and Mantua, NJ, would be surprised to learn the condition of the park 15 years ago. At that time, the park was small with only a few picnic tables, a ball field and some swings. More importantly, there was a sign by the lake warning visitors that the lake could not be used for recreation or fishing. An unsightly, rundown, former racetrack once used for stock car racing, was located next to the lake. The reason this area was in such poor condition was because it was contaminated by wastes from the nearby Lipari Landfill. After a successful cleanup, the lake was reopened for recreational use, and the new expanded park is currently in the final stages of construction. This is now considered to be a significant improvement to the quality of life for the surrounding communities.



Starting in 1958, hazardous household, chemical, and industrial wastes containing volatile organic compounds (VOCs) and heavy metals were dumped at the Lipari Landfill for over a dozen years. Over time, contaminants from the wastes seeped into the underlying aquifer and migrated to marshes, streams, and the Alcyon Lake. Area residents, some living only a few hundred feet from the landfill, complained of strong chemical odors and respiratory problems. The soil, groundwater, surface water, and sediments had become a health and environmental threat to the community, and plant and wildlife. The landfill was closed in 1971, but not before at least one explosion and two fires had occurred.



When the contamination was discovered, EPA immediately installed a security fence to restrict access to the landfill, then in 1983, placed the site on the list of the nation's priority hazardous waste sites. To control the source of contamination, EPA constructed a slurry wall and capped the landfill. To clean up on-site groundwater and leachate, EPA installed a pump and treatment system which has extracted and treated 100 million gallons of leachate, so far. For off-site contamination, such as the marsh, aquifers, streams, and the lake, the potentially responsible party (PRP) collected and treated the groundwater and leachate and discharged it to the county sewer lines. They also excavated and treated contaminated soils and sediments, then placed them on the former racetrack. Both the off-site and on-site areas are being monitored to ensure the cleanup is effective. The lake was reopened for recreational use in 1995.

To achieve this successful cleanup and redevelopment, EPA formed partnerships with the State, the Borough of Pitman, the affected communities, and the PRP. EPA provided incentives for the Pitman Mayor's Advisory Committee to purchase the property, which included the former racetrack, and allow EPA to clean it up. Specifically, EPA compensated them for use of the land during cleanup, agreed not to transport contaminated soils through the streets, returned the property to Pitman, and accelerated the cleanup of the lake. This partnership resulted in substantial savings on disposal costs for EPA, and paved the way for the construction of new expanded park, which is expected to be completed in 1999. EPA also worked with the communities to bring this contaminated property back into productive use including finding a mutually beneficial location to place the treated materials.

If you would like to learn more about EPA's efforts to promote the redevelopment or reuse of Superfund sites, please write to [reuse.info@epa.gov](mailto:reuse.info@epa.gov), or call Melissa Friedland at (703) 603-8864 or John Harris at (703) 603-9075.

To see more examples of Recycled Superfund sites, please visit EPA's home page at:  
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# Commencement Bay Recycling Superfund Sites *Tacoma, Washington*

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The Commencement Bay Nearshore/Tideflats site, located in Tacoma, Pierce County, Washington, consists of approximately 12 square miles of shallow water, shoreline, and adjacent developed and industrialized land. It is strategically located in Puget Sound and offers connections to sea, rail, highway, and air transportation networks. The Sitcum and St. Paul Waterways are industrial and commercial shipping channels within Commencement Bay that serve the Port of Tacoma. EPA worked with the Port of Tacoma to include cleanup of the Sitcum Waterway in their existing expansion effort on the nearby Blair and Milwaukee Waterways. By combining redevelopment plans with Superfund site cleanup, the Port has created a competitive advantage for Tacoma businesses by providing port access for larger vessels and by increasing container storage space in the port areas. Today, the Port of Tacoma is the seventh largest container port in North America. An added benefit of the cleanup, expansion, and redevelopment of the Port of Tacoma was the creation and restoration of aquatic habitats. Site cleanup of the St. Paul Waterway has provided seven acres of essential mud flats habitat where numerous fish, birds, wildlife, and plant species thrive. In addition, the Port restored approximately nine acres of wetlands along nearby Clear Creek in exchange for filling in the Milwaukee Waterway.



Textiles, chemicals, machinery, and food products from all over the world are stored and distributed at the Port of Tacoma. The diverse industrial activities conducted in this area—including shipbuilding, oil refining, chemical manufacturing and storage, and pulp and paper manufacturing—caused the release of hazardous substances into the marine environment. The result was contamination of bottom sediment in the waterways of the Tideflats industrial area and along the shoreline in the Nearshore area.

In 1983, EPA added the Commencement Bay Nearshore/Tideflats site to the Agency's list of priority hazardous waste sites requiring investigation and cleanup. Dredged, contaminated sediments from Sitcum and Blair were used to fill in the Milwaukee Waterway, and a 23-acre marine container storage terminal was created by capping and paving the dredge pile. At the St. Paul Waterway, Simpson Tacoma Kraft Company and environmental officials agreed to cover the areas of contamination with clean sediment. Using mud from the nearby Puyallup River, the company created a new, textured bottom that spans 17 acres of the Bay. Seven of these acres were used to form the new intertidal habitat.

There are several key ingredients that helped to make the cleanup, redevelopment, and restoration of these waterways a Superfund success story. The partnership forged between EPA, the Washington State Department of Ecology (WSDE), and the Simpson Tacoma Kraft Company allowed for an effective cleanup, and provided an aquatic habitat within the St. Paul Waterway. The partnership between EPA, WSDE, and the Port of Tacoma effectively combined the cleanup of the Sitcum Waterway with the Port of Tacoma's navigational improvement project creating a competitive advantage for Tacoma businesses.

If you would like to learn more about EPA's efforts to promote the redevelopment or reuse of Superfund sites, please write to [reuse.info@epa.gov](mailto:reuse.info@epa.gov), or call Melissa Friedland at (703) 603-8864 or John Harris at (703) 603-9075.

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**Promoting  
Reuse Opportunities**



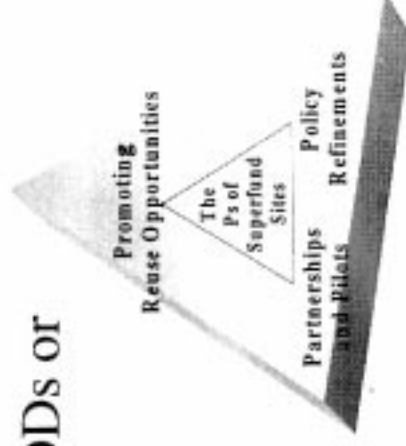
**The  
Ps of  
Recycling  
Superfund  
Sites**

**Partnerships  
and Pilots**

**Policy  
Refinements**

# Standard Operating Principles

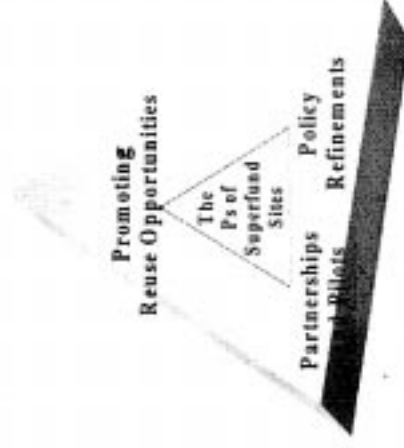
- EPA's principal mission is protection of human health and the environment
- EPA will act as a catalyst in facilitating site reuse as part of cleanup
- EPA's policy of "Enforcement First," including cost recovery, remains central to the Superfund Program
- EPA remains committed to the goal of accelerated Superfund cleanups
- The Recycling Initiative will not require reopening RODs or Consent Decrees



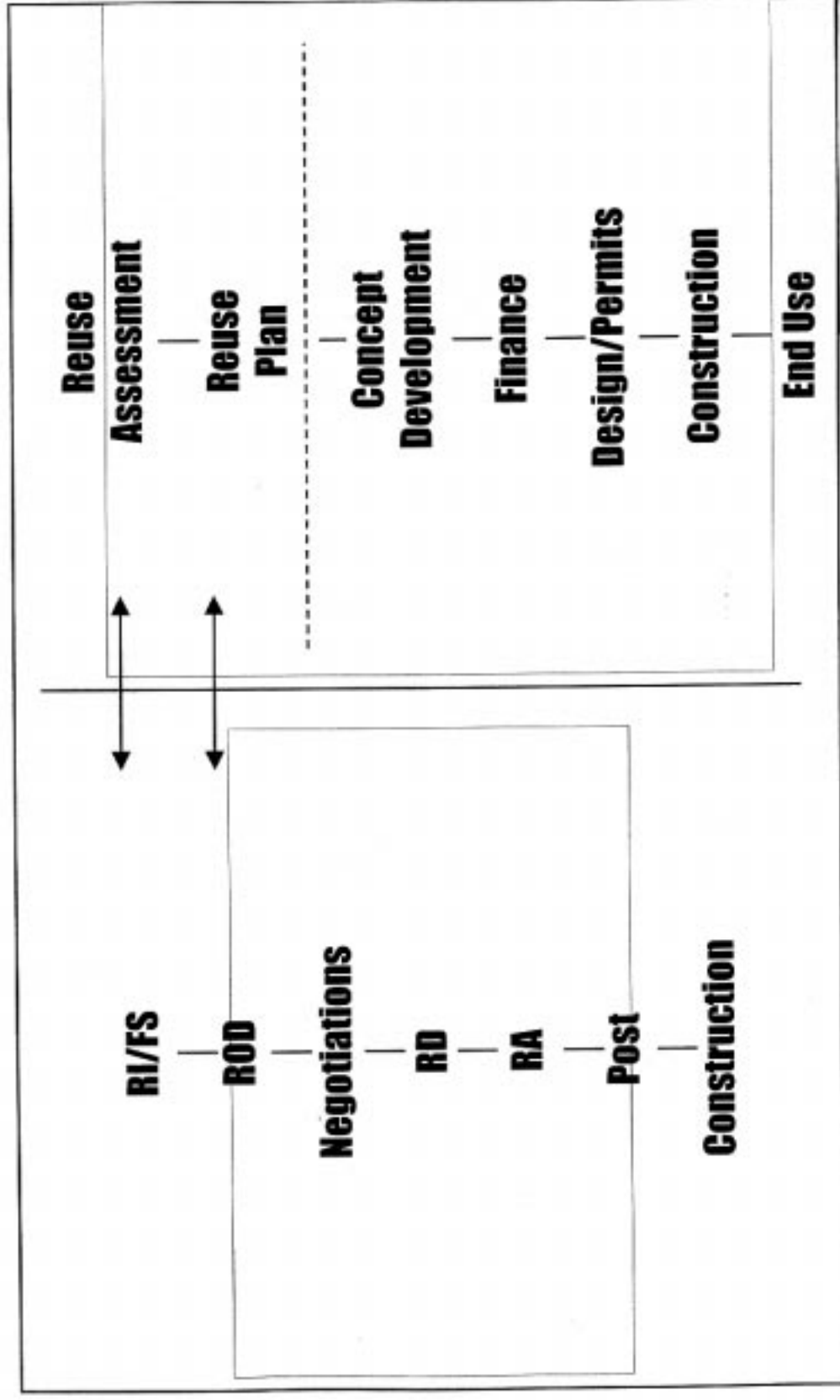


# Baseline

- 148 “recycled” sites (106 in actual use; 42 planned)
- For 76 “recycled sites” analyzed to date (not including Federal facilities):
  - over 11,000 on site jobs supported
  - with over \$270,000,000 annual incomes
  - and over 16,000 acres returned to ecological or recreational reuse

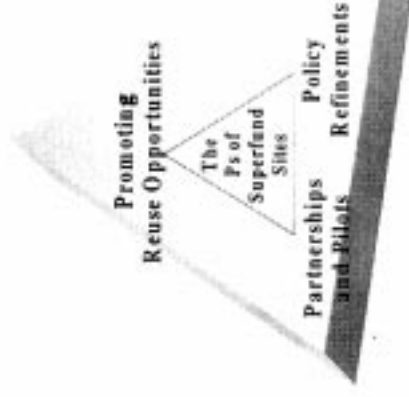


# Reuse Planning



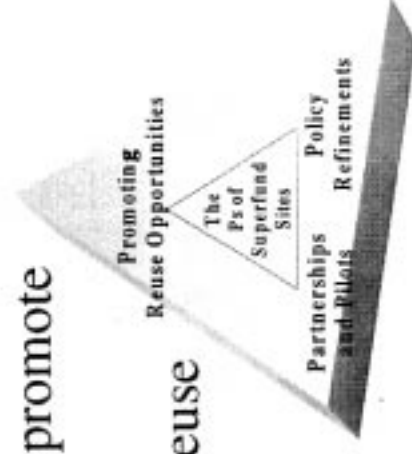
# Key Components of the Proposal (the Ps)

- Promoting Reuse Opportunities
  - Document and publicize successes
  - Develop tools for site managers and reuse stakeholders
  - Identify and publicize sites with reuse potential
  - Serve as a clearinghouse for private sector entities with an interest in the reuse of Superfund sites



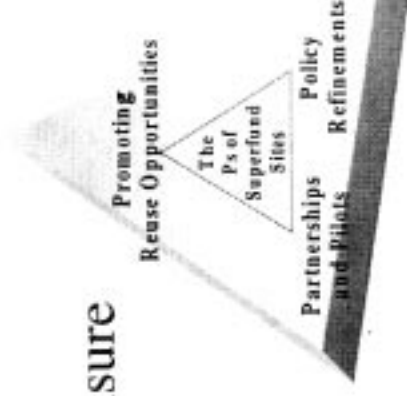
# Key Components of the Proposal (the Ps)

- **Partnerships**
  - Federal family--commitment of existing resources to assist demonstration communities, e.g.:
    - HUD (economic development grants)
    - COE (wetlands/other ecological enhancements)
    - DOT (highway & transit funding under TEA-21; Airport Expansion)
    - EDA (development grants for distressed areas)
  - MOUs between Federal partners to establish working relationships and leverage resources
  - Changes in policy/guidance by Federal partners to promote eligibility of Superfund sites for assistance
  - States and Tribes (reuse advisors; integrating site reuse assessments with economic development plans)



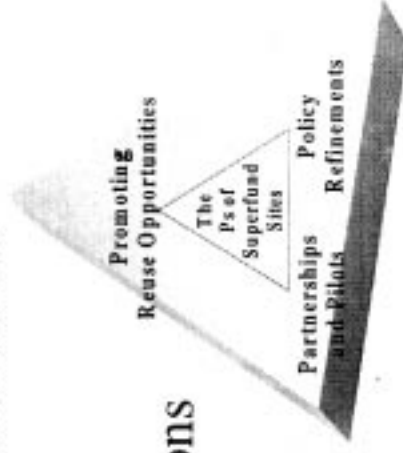
# Key Components of the Proposal (the Ps)

- **Policy Refinements**
  - Amend existing guidances to define their application to reuse/future land use considerations (e.g., Land Use Guidance, ROD guidance, 5-Year review guidance, TAG guidance)
  - Clarify existing guidances or provide training as needed (consideration in PPAs, appropriate uses of the fund, use of cooperative agreements with local governments to support land use planning)
  - Develop new guidance (on newly listed sites to ensure consideration of reuse potential)



# Key Components of the Proposal (the Ps)

- **Pilots and Demonstration Projects**
  - With local governments, demonstrating cooperative agreements and reuse advisors thru IPAs
  - With States and Tribes, demonstrating reuse advisors and integration with State planning processes
  - At NPL sites with planned or ongoing RI/FSs
  - At NPL sites adjacent to or in Brownfield pilot communities and showcase communities
  - At non-NPL sites with “substantial” removal actions





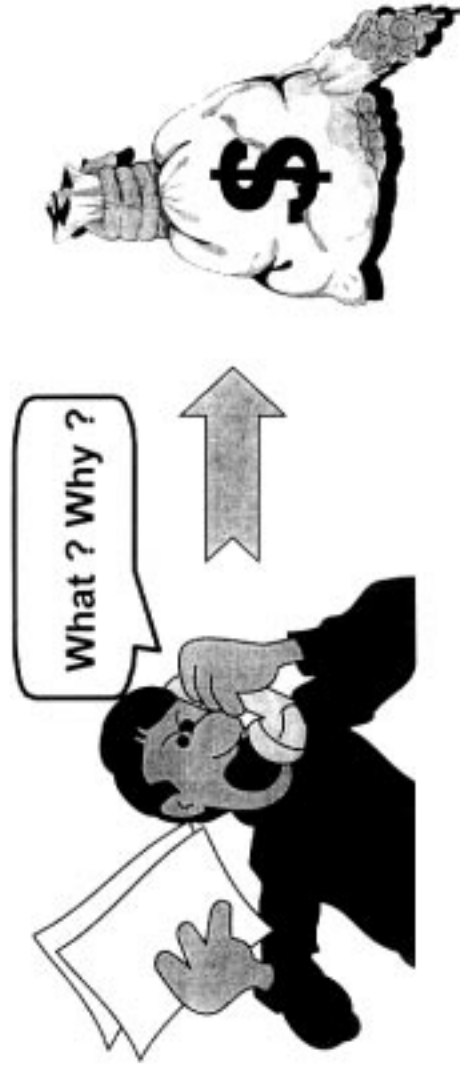
# ***Civil Works Missions & Programs***



Civil Works Orientation Course - F

# CORPS' MISSIONS:

- ◆ Missions changed throughout History!
  - ▼ Legislation
  - ▼ Administrative Policies
- ◆ Shifting - Federal Responsibilities to non-Federal Responsibilities





# **CIVIL WORKS MISSIONS:**

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- ★ **Navigation**
- ★ **Flood Damage Reduction**
- ★ **Ecosystem Restoration**
- ▼ **Hurricane Storm Damage Reduction**
- ▼ **Water Supply (Municipal/Industrial)**
- ▼ **Hydropower**
- ▼ **Recreation**



**HIGH PRIORITY**

# OTHER CIVIL WORKS MISSIONS:

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- ▼ Regulatory Program
- ▼ Flood Plain Management Services (FPMS)
- ▼ Section 22 - Planning Assistance to States
- ▼ Emergency Operations/Disaster Response
- ▼ Engineering Research & Development
- ▼ Support for Others (SFO)



# EVOLVING MISSIONS:

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- ▼ Ecosystem Restoration & Protection
- ▼ Environmental Infrastructure
- ▼ Watershed Planning



***FASTER, BETTER, CHEAPER***



# SEEK GROWTH OPPORTUNITIES

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## ◆ Support For Others (SFO):

- ▼ Corps performs work funded by other Federal agencies, by state and/or local governments, by native American tribes, non-government organizations, and even foreign governments.



## **SUPPORT FOR OTHERS**

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- ◆ Accomplishes the same types of activities performed by the Corps in the Civil Works and Military programs, but on a fully reimbursable basis.
- ◆ Guidance: ER 1140-1-211 (1992).

## **SUPPORT FOR OTHERS (cont.'d)**

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### **◆ SFO for other Federal agencies:**

- ▼ **Authority: Economy in Government Act**
- ▼ **Funding: 100% customer cost, paid routinely**
- ▼ **Example: Wastewater treatment plant construction management for USEPA**

# UNBUDGETED MISSIONS:

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- ◆ Project Planning, Design and/or Construction which must be directed by the Congress!



*"Studies & projects which are not included in the President's Budget"*



# PLANNING PROGRAMS:

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- ◆ GENERAL INVESTIGATIONS
  - ▼ Specifically authorized (“named”) studies
  - ▼ Section 22 WRDA 1974 - Planning Assistance to States
  - ▼ Section 206 Flood Control Act of 1960 - Flood Plain Management Services
  - ▼ Section 216 Flood Control Act of 1970 - Review of Completed Projects



# **Programmatic**



## **Environmental Authorities**

- **Project Modifications for the Improvement of the Environment**  
Section 1135 of WRDA 1986, as amended
- **Aquatic Ecosystem Restoration**  
Section 206 of WRDA 1996
- **Beneficial Uses of Dredged Material**  
Section 204 of WRDA 1992, as amended

# Programmatic Environmental Authorities

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## • References:

### PLANNING HOMEPAGE -

<http://www.usace.army.mil/functions/cw/cecwp.htm>

### IM HOMEPAGE -

<http://www.usace.army.mil/inet/usace-docs/eng-circulars/sec1105-2-214.tc>



## **Section 1135 Project Categories**

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- **Modification in structures and/or operations of Water Resources Projects Constructed by the Corps**
- **Restoration at locations where it is demonstrated that the construction or operation of an existing project contributed to the degradation**
- **Corps project includes projects constructed or funded jointly by the Corps and another Federal Agency**



## **Section 206 Project Category**

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- Restoration of aquatic ecosystem structure and function

## Section 204 Project Category

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- Must be associated with dredging of an authorized Corps navigation project
- For the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands
- Section 207 of WRDA 96 may select a disposal method that is not the least-cost option, if Secretary determines incremental benefits are reasonable in relation to the cost





# **Project Cost Sharing**

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<b>Program</b>	<b>Federal</b>	<b>Non-Federal</b>
<b>Section 1135</b>	<b>75%</b>	<b>25%</b>
<b>Section 206</b>	<b>65%</b>	<b>35%</b>
<b>Section 204</b>	<b>75%</b>	<b>25%</b>

# Eligibility Criteria

(Continued)

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- **Lands:**

Not Land Intensive

LERRDs apply to non-Federal Share

- **Mitigation:**

Design to avoid any requirement for fish and wildlife mitigation

May not be used as wetlands banks or mitigation credit for the non-Federal sponsor



# ***Operation and Maintenance***

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- **Section 204 and 206 - Non-Federal sponsor is responsible for 100% of the OMRR&R**
- **Section 1135 - Usually non-Federal sponsor is responsible for the incremental OMRR&R**



# ***Operation and Maintenance***

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- **Section 204 and 206 - Non-Federal sponsor is responsible for 100% of the OMRR&R**
- **Section 1135 - Usually non-Federal sponsor is responsible for the incremental OMRR&R**

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2

Questions



Communities face many challenges in their efforts to redevelop Brownfields. The Brownfields Initiative provides an opportunity for the Corps to help restore contaminated areas when restoration is integral to solving water resource problems. The Corps' Civil Works Planning process may consider Brownfields in conjunction with specific study and program authorities. The following authorities may be used to complement Brownfields redevelopment.

## Congressionally Authorized Projects for Water Resources

- Can address almost any water resources problem
- Reconnaissance study, feasibility study, plans, specifications and construction
- Construction cost sharing
  - Flood Control - 65% Federal, 35% non-Federal
  - Commercial Navigation - 20-60% Federal
  - Recreation - 50% Federal, 50% non-Federal
- Requires study and project authorities and annual appropriations by Congress

## Continuing Authority Projects

- Funded annually by Congress
- Generally for smaller type water resources projects
- Requires a study, economic justification and environmental acceptability for a project to be constructed

### *Section 14-Streambank and Shoreline Erosion*

- For public and nonprofit facilities
- \$1,000,000 Federal cost limitation
- 65% Federal, 35% non-Federal
- Brownfield element-Assistance with facilities on Brownfield sites threatened by shore or streambank erosion problems

### *Section 101-Storm Damage Shore Protection*

- Hurricane and storm damage protection to facilities
- \$2,000,000 Federal cost limitation
- 65% Federal, 35% non-Federal
- Brownfield element-Development and construction of projects which protect existing facilities on Brownfield redevelopment sites

### *Section 107-Navigation*

- For small general navigation projects
- \$4,000,000 Federal cost limitation
- From 20-60% Federal, remainder non-Federal
- Brownfield element-Aid to Brownfield redevelopment efforts on sites impacted by navigation projects

### *Section 111-Mitigation of Shore Damages Attributable to Federal Navigation Projects*

- For mitigation of shore damages directly caused by Federal Projects
- \$2,000,000 Federal cost limitation
- Cost sharing is the same for the navigation projects causing the problem
- Brownfield element-Assistance to Brownfield redevelopment efforts in reducing erosion or accretion to a level prior to the construction of the Federal project

### *Section 205-Flooding*

- For local flooding problems
- \$5,000,000 Federal cost limitation
- 65% Federal, 35% non-Federal
- Brownfield element-For local flooding problems on Brownfield redevelopment sites

### *Section 208-Suiting and Clearing for Flood Control*

- For removing stream obstructions
- \$5,000,000 Federal cost limitation
- 65% Federal, 35% non-Federal
- Brownfield element-Removal of stream obstructions impacting Brownfield redevelopment sites

## Environmental Restoration Projects

### *Section 204-Ecosystem Restoration in Connection with Dredging*

- For using dredge material to produce high value environmental outputs
- No particular cost limitation. Federally funded up to cost for normal dredging/disposal (base plan)
- 75% Federal, 25% non-Federal for costs over the base plan
- Brownfield element-Use of clean dredge material to cap Brownfield redevelopment sites

### *Section 206-Aquatic Ecosystem Restoration*

- For restoring degraded ecosystems
- \$5,000,000 Federal cost limitation
- 65% Federal, 35% non-Federal
- Brownfield element-Protection and improvement of environmental quality on a Brownfield redevelopment site

### *Section 1135-Project Modifications for Improvement of the Environment*

- For modification of existing Corps projects to restore ecosystems
- \$5,000,000 Federal cost limitation
- 75% Federal, 25% non-Federal
- Brownfield element-To restore a degraded ecosystem on a Brownfield redevelopment site to a less degraded, more natural condition if the site is impacted by an existing Corps project

## Miscellaneous Authorities

- *Section 22-Planning Assistance to States and Tribes*
  - Provides Corps expertise to help states in comprehensive water resources related planning
  - 50% Federal, 50% non-Federal
  - Limited to \$500,000 per state or tribe
- **Brownfield element-Aid to Brownfield redevelopment efforts in urban river corridors and ports with comprehensive water and related land resources development plans**
- *Section 401-Technical Assistance for Remedial Action Planning*
  - Planning, engineering and design assistance for Great Lakes Areas of Concern
  - 50% Federal, 50% non-Federal
  - Annual funding not to exceed \$3,000,000
- **Brownfield element-Provides assistance to Brownfield redevelopment sites located within the Great Lakes Areas of Concern**

### *Support for Others*

- Provides Corps support and expertise for all types of planning and engineering
- Done on a reimbursable basis
- No Federal funds provided
- **Brownfield element-Provides technical and management assistance for Brownfield site investigation and redevelopment**

### *General non-Federal Requirements for Corps Projects*

- Cost-sharing of feasibility studies (50% non-Federal)
- Must provide all lands, easements, rights-of-way and disposal areas
- Cost-share project construction (variable)
- Assume operations and maintenance after the project is constructed
- **Brownfield element-Assistance in project construction on Brownfield redevelopment sites**

*Let us help you work for*

***Brownfields redevelopment in your communities***

*For more information, contact the*

***Corps Brownfields team member in your area***

The Corps is a Federal agency working world-wide. We have been solving large complex problems for over 200 years. Corps capabilities that can make a difference for Brownfields communities include:

- Partners with private contractors
- Responds quickly
- Assembles multidisciplinary technical teams
- Provides a rational and methodical approach that ensures "best fit" decisions
- Brings people and ideas together for solutions that work
- Provides oversight with the public's interest in mind
- Follows through from start to finish on project activities

In addition, our activities range from environmental assessment and remediation to habitat restoration. Corps expertise that can make a difference for Brownfields redevelopment include:

- Site Assessment**
  - Site characterization
  - Habitat assessment
  - Urban planning
  - Stakeholder coordination
  - Interagency negotiation/coordination
- Site Remediation**
  - Creating/enhancing ecosystems in harmony with the built environment
  - Ecosystem design options
  - Ecosystem incremental cost analysis
  - Use of innovative technologies
  - Application of construction management
  - Regulatory documentation
  - Public involvement

- Site Redevelopment**
  - Financial planning review
  - Closure documentation
  - Real estate appraisal and acquisition

#### Sustainable Renew

- Considered throughout the Corps of Engineers' process
- Management monitoring systems that emphasize strong involvement of communities

#### Corps Brownfields Teams

<b>Washington, DC</b> Washington, DC	(202) 761-8879 (202) 761-8892
<b>Portland, OR</b> Portland, OR	(503) 808-3744 (402) 221-7715
<b>Omaha, NE</b> Omaha, NE	(503) 808-4790 (503) 808-4790
<b>Kansas City, MO</b> Kansas City, MO	(816) 983-3366 (816) 983-3366
<b>Seattle, WA</b> Seattle, WA	(206) 764-3365 (402) 221-4574
<b>San Francisco, CA</b> San Francisco, CA	(415) 977-8171 (916) 557-6965
<b>Sacramento, CA</b> Sacramento, CA	(916) 557-6965 (916) 557-6965
<b>Los Angeles, CA</b> Los Angeles, CA	(213) 482-3854 (213) 482-3854
<b>Chicago, IL</b> Chicago, IL	(312) 353-3679 (312) 353-3679
<b>Buffalo, NY</b> Buffalo, NY	(716) 879-4371 (716) 879-4371
<b>Chicago, IL</b> Chicago, IL	(312) 353-6000 c3012 (312) 353-6000 c3107
<b>Chicago, IL</b> Chicago, IL	(312) 353-6000 c3001 (312) 353-6000 c3001
<b>Pittsburgh, PA</b> Pittsburgh, PA	(412) 395-7310 (412) 395-7310
<b>Nashville, TN</b> Nashville, TN	(615) 736-7985 (615) 736-7985
<b>Detroit, MI</b> Detroit, MI	(313) 226-3444 (313) 226-3444
<b>Lexington, KY</b> Lexington, KY	(502) 625-7118 (502) 625-7118
<b>New York, NY</b> New York, NY	(718) 491-8773 (718) 491-8773
<b>New York, NY</b> New York, NY	(718) 491-8773 (718) 491-8773
<b>Baltimore, MD</b> Baltimore, MD	(410) 962-8196 (410) 962-8196
<b>Philadelphia, PA</b> Philadelphia, PA	(215) 656-4927 (215) 656-4927
<b>Norfolk, VA</b> Norfolk, VA	(757) 441-3535 (757) 441-3535
<b>New York, NY</b> New York, NY	(212) 364-2119 (212) 364-2119
<b>Boston, MA</b> Boston, MA	(978) 318-8895 (978) 318-8895
<b>Fort Stoddard, HI</b> Fort Stoddard, HI	(808) 438-4959 (808) 438-4959
<b>Atlanta, GA</b> Atlanta, GA	(404) 562-5212 (404) 562-5212
<b>Charleston, WV</b> Charleston, WV	(843) 727-4759 (843) 727-4759
<b>Jacksonville, FL</b> Jacksonville, FL	(904) 233-3583 (904) 233-3583
<b>Mobile, AL</b> Mobile, AL	(334) 696-3606 (334) 696-3606
<b>Savannah, GA</b> Savannah, GA	(912) 652-5166 (912) 652-5166
<b>Wilmington, NC</b> Wilmington, NC	(910) 251-4694 (910) 251-4694
<b>Atlanta, GA</b> Atlanta, GA	(404) 562-5228 (404) 562-5228
<b>Vicksburg, MS</b> Vicksburg, MS	(661) 634-5026 (661) 634-5026
<b>Vicksburg, MS</b> Vicksburg, MS	(661) 634-5026 (661) 634-5026
<b>Rock Island, IL</b> Rock Island, IL	(309) 794-5643 (309) 794-5643
<b>St. Paul, MN</b> St. Paul, MN	(651) 290-5443 (651) 290-5443
<b>Vicksburg, MS</b> Vicksburg, MS	(661) 634-5026 (661) 634-5026
<b>New Orleans, LA</b> New Orleans, LA	(504) 862-2937 (504) 862-2937
<b>Memphis, TN</b> Memphis, TN	(901) 544-8722 (901) 544-8722
<b>St. Louis, MO</b> St. Louis, MO	(314) 331-8460 (314) 331-8460
<b>Rock Island, IL</b> Rock Island, IL	(309) 794-5439 (309) 794-5439
<b>Dallas, TX</b> Dallas, TX	(214) 767-3361 (214) 767-3361
<b>Dallas, TX</b> Dallas, TX	(214) 767-3361 (214) 767-3361
<b>Ft. Worth, TX</b> Ft. Worth, TX	(817) 978-9923 x1108 (817) 978-9923 x1108
<b>Little Rock, AR</b> Little Rock, AR	(501) 324-7134 (501) 324-7134
<b>Galveston, TX</b> Galveston, TX	(409) 766-3917 (409) 766-3917
<b>Tulsa, OK</b> Tulsa, OK	(918) 699-7239 (918) 699-7239
<b>Vicksburg, MS</b> Vicksburg, MS	(661) 634-3845 (661) 634-3845
<b>Vicksburg, MS</b> Vicksburg, MS	(661) 634-3939 (661) 634-3939
<b>Vicksburg, MS</b> Vicksburg, MS	(661) 634-3610 (661) 634-3610

• Showcase Community Point of Contact

Find us on the web at <http://brownfields.us> or <http://army.mil/index.html>



US Army Corps  
of Engineers

Put the Corps to Work  
for You . . . . .

Use Our Existing  
Authorities

to Complement  
Your Brownfields  
Redevelopment

Commitment to Communities



Environmental  
Protection Agency



DEPARTMENT OF THE ARMY  
US ARMY CORPS OF ENGINEERS

Existing Laws  
Which Provide Authority for  
US Army Corps of Engineers to Support  
Brownfields Pilot Sites.

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- Section 221, WRDA 96. Amends Section 22 of WRDA 74 to expand the areas of planning effort to include watersheds and ecosystems, and expands the annual program budget from \$6 million to \$10 million, with an increase of per state expenditure of \$300,000 to \$500,000. (Removes outdated phase-in of 50% non-Federal cost sharing.)
- Section 216, Flood Control Act of 1970. Authorizes studies to review the operation of completed Federal projects and recommend project modifications "when found advisable due to significantly changed physical or economic conditions... and for improving the quality of the environment in the overall public interest".
- Section 1135, WRDA 86. As amended, Section 1135 authorizes the Secretary to review the operation of water resources projects to determine the need for modifications in their structures and/or operations for the purpose of improving the quality of the environment in the public interest. Projects are cost shared 75% Federal and 25% local. WRDA 96 expands the Section 1135 authority to allow for small environmental restoration projects off the site of the Corps project causing the degradation.
- Section 204, WRDA 92. Restoration of Environmental Quality. Expands the Section 1135 program to allow for small environmental restoration projects either at the project site or off the project site when it is found that the Corps project has contributed to the degradation of the environment. Clarifies that the \$5 million limit is for the Federal share of the project only. Specifies the non-Federal cost share is 25% and that not more than 80% of the non-Fed share may be in kind. Defines water resources projects constructed by the Secretary to include projects constructed or funded jointly by Army and some other Federal agency.
- Section 205, WRDA 96. Environmental Dredging. Amends Section 312 of WRDA 90 to authorize annual appropriations of \$20 million to do environmental dredging, including removal and remediation, as part of O&M of Federal navigation projects and in non-project specific waters of the U.S. In carrying out this work, Secretary shall give priority to Brooklyn Waterfront, NY; Buffalo Harbor and River, NY; Ashtabula River, OH; Mahoning River, OH; and Lower Fox River, WI.
- Section 206, WRDA 96. Aquatic Ecosystem Restoration. Authorizes small aquatic ecosystem restoration projects (\$5 million Federal cost each) to improve the quality of the environment if they are in the public interest and cost effective; cost shared 35% non-Federal with 100% non-Federal O&M; \$25 million per year authorization of appropriations.
- Section 906, WRDA 86. Section 906 (e) provides guidance on cost sharing to be recommended to Congress for projects to enhance fish and wildlife resources including criteria for enhancement at 100 percent Federal costs. It has not been implemented since the Corps is not pursuing "enhancement" projects and the section is inconsistent with the cost sharing policy governing ecosystem restoration.
- Section 908, WRDA 86. Section 908 provides that the Secretary may undertake mitigation prior to project construction funding using appropriated mitigation funds. Section 908 has not been used since normal project funding would allow for the accomplishment of mitigation features as an early project implementation item, thus there was no need to establish a separate mitigation fund.

- Section 306, WRDA 90. Authorizes the Secretary to include environmental protection as one of the primary missions of the Corps. This provision has been implemented through the establishment of environmental restoration and protection as a budget priority and through guidance on ecosystem restoration.
- Section 203, WRDA 92. Authorizes the Secretary to accept contributions of cash, funds, materials and services from persons, including governmental entities, but excluding the project sponsor, in connection with the implementation of a water resources project for environmental protection and restoration purposes or for recreation. This is a relatively new authority supported by the Corps but which has not yet been extensively used.
- Section 907, WRDA 86. Authorizes the Secretary to consider the benefits attributable to measures included in a project for the purpose of environmental quality, including environmental improvements and fish and wildlife enhancement, to be at least equal to the costs of such measures.
- Section 307, WRDA 90. Section 307 (a) establishes a "no net loss of wetlands" and an "increase in the quality and quantity of the Nation's wetlands" as goals of the Corps Civil Works water resources development program.
- Section 212, WRDA 96. Engineering and Environmental Innovations of National Significance. Authorizes the Secretary to undertake studies and prepare reports that may lead to work under existing CW authorities or to recommendations for authorizations. \$1 million authorized annually for Fiscal Years 1997-2000. May accept funds from other agencies, States, or non-Federal interest
- The Economy in Government Act (31 U.S.C. 1535)
- The Intergovernmental Cooperation Act (31 U.S.C. 6505), (10 U.S.C. 3036d)
- The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), PL 96-510 as amended by The Superfund Amendments and Reauthorization Act (SARA), PL 99-499



# RECAP

## Remote Electronic Contract Administration Program

Lieutenant Colonel Jeffrey W. Hills, PE, CPCM  
Acting Chief, Environmental Division  
Directorate of Military Programs



## RECAP Agenda



- Current Situation / Problem
- Basic Concept
- Contract Oversight Improvements
- Contract Administration Improvements
- Virtual Engineering and Program Management
- Costs / Comparison
- Implementation Status





## Current Contract Administration Situation



- Most USACE Resident / Area Offices on military installations
- Non-military Customer base expanding
  - Remote project locations
  - Short duration (2-5 years)
  - Staffing difficulties, costs
- Pressure to reduce S&A
- On-Site supervision affected - Concerns of customers



## Problem / Solution



- **PROBLEM:** How can USACE improve or provide timely contract administration and oversight of projects in current environment
- **SOLUTION**
  - Technology Insertion- Current technology and products commercially available to cheaply augment contract administration and oversight
  - RECAP - Remote monitoring through use of time lapse digital photographs rapidly transmitted through INTERNET and stored on CDs.





## Basic Concept



- Digital Video Camera mounted at site
- Digital picture taken at selected intervals
- Uploaded to INTERNET - Firewalls to restrict access
- Field Offices move / monitor, others view
- Pictures stored in online database for instant recall (2 weeks)
- Archived to CD for further use
- Ideal for Environmental Projects and open construction

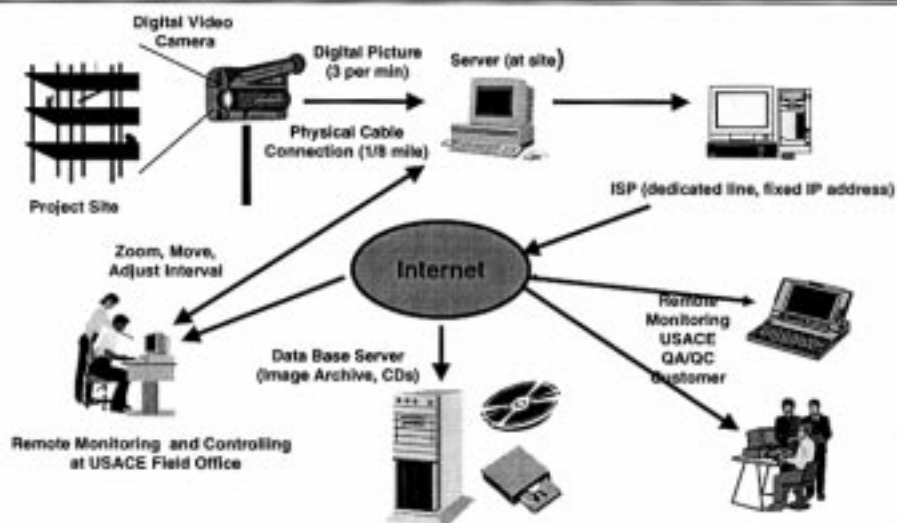
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- One Corps, One Regiment, One Team ... Serving Soldiers, the Army, the Nation -

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## RECAP Schematic



0012/19

- One Corps, One Regiment, One Team ... Serving Soldiers, the Army, the Nation -

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## Contract Oversight Improvements



- Expands USACE oversight capability
- Reduces S&A costs, lost time and TDY
- Allows for review of missed periods
- Improves / strengthens QA / QC of project
- Multiple viewing, Field Offices, District, stakeholders, customers
- Improves / Enhances Safety - Virtual Safety Inspections
- Reduces adversarial relationships
- Reduces potential for fraud



## Contract Administration Improvements



- Supports / augments contract file
- Provides time lapse digital photo history of project progress / performance
- Assists contract audits
- Supports contract modification and claims
- Cost contracts - reasonable, allocable, allowable determinations



## Virtual Engineering & Program Management



- Free VTC affect = virtual USACE
- Virtual Engineering
  - Virtual site visits - team electronically to site
  - Reduces associated costs - travel / mods / suspension of work / delays
- Virtual Project / Program Management
  - PM sees actual site condition / progress / problems
  - Travel when required
  - Project continuity - Digitized Institutional Knowledge



## Costs / Comparison



- Site Cost Estimate - \$ 20,000
  - Computer hardware - \$3,000
  - Software - \$8,800
  - Camera, rotor, weather proof dome wiring - \$5,500
  - Installation - \$3,000
- Annual Expense Estimate - \$11,000
  - Internet Connection (Dedicated, static-IP)
  - Central database server (2 week data storage, supplies, weekly CDs, DAT backup tapes, etc)



## Cost Comparison 3 Year Project



- **Current Field Costs:**
  - Avg. annual field rep. Salary costs (\$55,000) x 3 yr. = \$165,000
  - 59% of project observed
  - Effective rate = \$44.46 / observed hr
  - Generally 2 reps (8 hrs/day) = \$330,000
  - COSTS = \$88.92 / observed hour
- **RECAP Costs:**
  - System (\$20,000) + 3 yr. service @ \$11,000 = \$53,000
  - Avg. annual field rep. Salary costs (\$55,000) x 3 yr. = \$165,000
  - Total Costs \$218,000 for 24 hrs / 7 days
  - COSTS = \$8.31 / observed hour (\$34.94)



## Implementation Status



- **RECAP Pilot Program (current status)**
  - LA District - INS Project, Florence, AZ
  - USEPA - 3 projects identified
  - DOE, FETC - 1 project (tentative)
- **RECAP Implementation**
  - Phase 1 : Introductory Deployment
    - Used as appropriate
    - Project funded
    - Seek alternative funding
  - Phase 2 : Incorporation into business practices
    - Added to contract documents
    - Contractor establishes as part of QA/QC

# Assessment of EPA Cost Estimating Procedures and Methods

U.S. ARMY CORPS OF ENGINEERS

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## Background

HQ EPA has identified deficiencies in the development and review of Independent Government Cost Estimates (IGCE) related to level-of-effort work assignments. Because of this concern, EPA requested the Corps to conduct independent assessments of EPA cost estimating procedures, methods, and routine work practices of the EPA regions.

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## Objectives

- Perform assessment of cost estimating procedures, tools, and databases
- Evaluate procedures and processes for arriving at approved work assignment budgets
- Provide EPA with recommendations for cost preparation improvements

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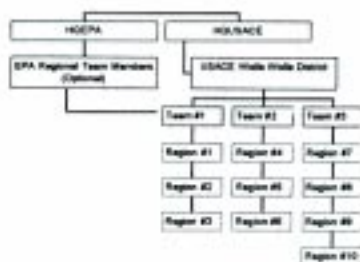
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## Team Organization




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## Team Makeup

**1 ea**

**EPA**

**2 ea**

**USACE**

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## Assessment Status

- Start Assessment 10/05/98
- Complete Assessment 1/15/99
- Draft Report (Regions) 12/30/98
- Complete Report (Regions) 1/22/99
- Draft Summary Report 3/31/99

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## Briefings for EPA

- Feb 1999 HQEPA Senior Management
- Mar 1999 Superfund Nat'l Policy Managers

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## Point of Contacts

- Mr. Miguel Jumilla, CEMP-EE, (202) 761-1359  
*E-mail: miguel.d.jumilla@usace.army.mil*
- Mr. Kim Callan, CENWW-ED-C, (509) 527-7511  
*E-mail: kim.c.callan@usace.army.mil*

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## Other Cost Estimating Support to EPA

- Development of Remedy Cost Estimating Procedures Manual : A Guide to Developing and Documenting Remedial Alternative Cost Estimate During the Feasibility Study
- Kansas City District Cost Estimating Support to Region 2

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## Project DOE-EM

At the request of the Department of Energy (DOE) Office of Environmental Management (EM), the Corps conducted independent assessments of the DOE multi-year cleanup plans. From October 1996 through September 1998, the Corps evaluated cost estimates, schedules, and technical scopes supporting the baselines for 13 DOE sites. The assessments identified approximately \$3.1 billion in potential savings.

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## Goals of Assessments

- Assure the reasonableness and achievability of individual site baseline plans.
- Analyze cost estimate bases and documentation to verify resource needs.
- Identify "potential benefits" where funding and plans can be adjusted to accelerate other site activities
- Identify opportunities for integration of activities across programs and sites.

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## Methodology and Approach

- Phase 1 - Reconnaissance-level assessment of the quality of estimates, schedules, technical scopes, and backup documents supporting site baselines at 13 sites.
- Phase 2 - Detailed investigations of selected target program activities that have been identified in Phase 1

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**CASRGW**

## **CONTAMINATED AQUATIC SEDIMENT REMEDIAL GUIDANCE WORKGROUP (CASRGW)**



**CASRGW**

## **EMPHASIS ON PERSISTENT, BIOACCUMULATING CHEMICALS & THEIR IMPACTS ON HUMAN HEALTH & THE ENVIRONMENT**



**CASRGW**

## **STARTING WORKGROUP PREMISE**

- An NPL listed site has been shown to have impacts on human health and / or the environment



**CASRGW**

## **CSMS REMEDIATION PROJECT GOALS**

- No acute or chronic toxicity to aquatic life or wildlife
- No significant risk to human health
- Restore and support existing and designated uses of the waterbody
- Implement pollution prevention and source controls



**CASRGW**

## **USE OF EXISTING GUIDANCE THAT IS APPLICABLE AND REASONABLE**

- Great Lakes National Program Office produced Assessment and Remediation of Contaminated Sediments (ARCS) Program for Congress
- Large amount of existing guidance available from U.S. Army Corps of Engineers ongoing research from the Waterways Experiment Station
- Province of Ontario has produced sediment site assessment guidance
- Inland Testing Manual
- Evaluating Environmental Effects of Dredged Material Management



**CASRGW**

## **CASRGW FOCUS**

- No Action
- Monitored Natural Attenuation
- Dredging
- Capping



**CASRGW**

## WORKGROUP CHALLENGE

- Many interests and perspectives are represented here.
- Even if you don't completely agree, ask yourself, "Can you live with it?"



**CASRGW**

## SHORT-TERM VS. LONG-TERM EFFECTIVENESS — WHAT ARE THE IMPACTS / TRADE-OFFS

### EX SITU REMOVAL

- Resuspension impacts
- Hot exposed sediment
- Over dredging potential
- Increased biota exposure
- Transportation risks
- Increasing volatilization to atmosphere transport vs. large volume mass reduction
- How do these risks compare to doing nothing?
- How do these risks compare to *in situ* stabilization (short-term vs. long-term)?



**CASRGW**

## SHORT TERM VS. LONG TERM IMPACTS — WHAT ARE THE IMPACTS / TRADE-OFFS (Cont'd)

### IN SITU STABILIZATION

- Natural attenuation issues
- Isolation of the biota vs. understanding release mechanisms
  - Advection
  - Diffusion
  - Consolidation
  - Bioturbation
  - Erosion & storm scour
  - Propeller wash
  - Anaerobic gases released
  - Ice formation
- Reduced flood storage capacity
- How do these risks compare to doing nothing?
- How do these risks compare to dredging short-term vs. long-term?



**CASRGW**

## SEDIMENT PROVIDES IMPORTANT HABITAT

- Food source for the food web
- Life cycles in the sediment
- Spawning & nursery areas



**CASRGW**

## COST

- Cost/benefit study not required
- How much pollution controlled for the \$\$ spent?
- Cost projection may be deliberately skewed
- What to do about no place to put dredged material / cost assumptions?
- What to do about free underwater land cost advantage?
- What to do about intangible costs / beneficial uses lost?



**CASRGW**

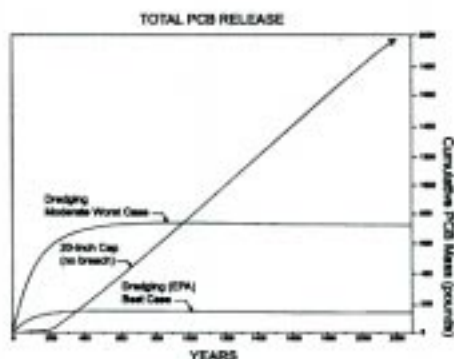
## IMPLEMENTABILITY

- With the possible exception of *in situ* treatment, all sediment remediation technologies are implementable; subject to environmental conditions at the site
- Environment Canada has developed a CD-ROM program called SEDTEC which provides a growing list of available technologies and their vendors



## REDUCTION OF TMV THROUGH TREATMENT

- Most sediment remedies don't involve treatment
- The Administrator in Reauthorization testimony has indicated:
  - Treatment of highly toxic or highly mobile waste offers advantages over containment or other measures
  - Willingness to exchange permanent solutions and treatment to MEP for emphasis on long-term reliability, provided preference for treatment of highly toxic or highly mobile waste ("principal threats") is retained
- Bayou Bonfouca — "Treatment was necessary at this site to permanently eliminate the threat from these materials."



Concentration of PCBs in Montauk River and Harbor Surface Water  
 (EPA design assumption: No dredging of mud)



## OTHER UNCERTAINTIES TO CONSIDER

- What to do about hypothetical catastrophic failure assumptions? Are these realistic/meaningful?
- What to do about storm flow assumptions?
  - 50 year magnitude, 100 years? 500 years? Is this reasonable?
- What to do about model uncertainty
- Compare/contrast releases from aquatic in situ stabilization vs. upland landfill or CDF
- Compare/contrast marine construction vs. upland construction & containment capabilities



## REMEDIAL GUIDANCE REQUIREMENTS

- Seeking best combination of technologies that will effectively manage site risks
- End-point acceptability and decision criteria for in-situ and ex-situ contaminated sediment remedies
- Use of NCP's nine criteria for remedy selection
- Emphasizing the nine criteria's five "balancing" criteria
  - Provide long-term effectiveness and permanence
  - Short-term effectiveness
  - Reduction of TMV through treatment
  - Implementability
  - Cost



## GOALS FOR GUIDANCE

- Intuitively & realistically we will Not be able to dredge every mile of contaminated streambed at NPL sites
  - Remedy types will need to be combined at sites
  - We will need to seek the best combination of technologies that will effectively manage risks
  - Use existing guidance to maximum extent practicable
  - Ultimately, our goal should be to restore surface water to beneficial uses



## CASRGW TASK TIMELINE

- First draft of project sub-groups guidance by APRIL 30, 1999
- Third CASRGW meeting May/June 1999
- Introduction and overview chapters by JUNE 30, 1999
- Second draft of project sub-groups' guidance document by SEPTEMBER 30, 1999
- Final draft of CASRGW guidance document by SEPTEMBER 30, 2000

## **CONTRACTS 2000 STRATEGY**

- **ENFORCEMENT SUPPORT SERVICES CONTRACTS (ESS)**

These contracts will remain essentially the same, except that Alternative Dispute Resolution (ADR) services may now be obtained under the ESS contracts. In addition, records management support will be procured primarily through the National Records Management Contract.

- **RESPONSE ACTION CONTRACTS (RACs)**

RACs will be split into two types of functional contracts-- (I) design contracts (Architect/Engineer Contracts) to perform RI/FS, design, and oversight and (ii) remedial action contracts for construction.

- **SUPERFUND TECHNICAL ASSESSMENT & RESPONSE TEAM (START) CONTRACTS**

The START contracts will remain essentially the same. However, there may be limited cases, on an exception basis, where it may be appropriate for the START contractor to do the RI/FS.

- **EMERGENCY AND RAPID RESPONSE SERVICES (ERRS) CONTRACTS**

The ERRS contracts will remain the same.

- **REGIONAL OVERSIGHT CONTRACTS (ROCs)**

The ROC contracts will remain the same.

- **INTERAGENCY AGREEMENTS (IAGs)**

We will continue to rely on the U.S. Army Corps of Engineers and the Bureau of Reclamation for remedial construction support.

- **ANALYTICAL SERVICES**

Preliminary recommendations were to maintain the existing infrastructure for providing analytical services and use a decision tree for source selection. OSWER, in consultation with the Regions, will evaluate whether the current infrastructure will be appropriate in the year 2000, based on future program requirements. Final decisions will be made after OSWER's evaluation is completed.





**DEPARTMENT OF THE ARMY**

U.S. Army Corps of Engineers  
WASHINGTON, D.C. 20314-1000

REPLY TO  
ATTENTION OF:

CEMP-RS(200-1a)

**D R A F T**

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Cost management of Cost-Reimbursement Contracts in the Superfund and FUSRAP Programs

1. References: a. Bunker Hill Power Point presentation dated 28 August 1997.  
b. Superfund Organization Chart dated 7 Dec 1998.  
c. Implementation of the PROMIS for Environmental Programs
2. Our customer, the U.S. Environmental Protection Agency, expects the Corps to manage Superfund projects efficiently. To achieve this, we should manage costs on a real time basis with the objective of providing proactive leadership and competent direction to the contractor. In addition, the Corps must continually strive to provide a high quality product that meets the customer's needs. These goals should be achieved at the lowest reasonable cost.
3. The proper execution of a cost-reimbursement project requires the close coordination of the Corps and its contractors. Together, they share the management of the project, including management of costs. The uncertain nature of environmental remediation work makes the management of cost a challenge. However it is the Government that retains the greatest cost risk. The initial baselines and schedules are, at best, approximations of ultimate project costs. Accordingly we must manage the actual costs of Superfund projects commensurate with the Government's risk relationship under the contract. Attention must be paid to the daily cost tracking and cost avoidance with the objective of achieving the lowest reasonable cost.
4. To ensure that the Superfund and FUSRAP reimbursement projects are undertaken with this objective in mind, CEMP-RS has developed a cost management tool which when utilized a graphic representation of actual costs versus the estimated costs over time, along with significant cost management milestones.
5. This management tool, along with daily cost tracking are integral requirements in Effectively managing projects in the subject programs to monitor the routine cost management of cost-reimbursement contracts.

CEMP-RS

SUBJECT: Lowest Reasonable Cost for Superfund Projects Cost-Reimbursement Contracts

Accordingly you are requested to utilize the power point presentation at reference 1a. Please contact HQUSACE persons associated with the EPA regions as indicated in reference in 1b to gain access to this software as soon as possible.

6. PROMIS guidance at the reference 1c requires the submission of these reports on semi annual basis, however for first four submissions, request you submit the charts on a quarterly basis beginning the third quarter of FY99.

7. The point of contact for this action is A.Nash Sood at (202) 761-8618.

FOR THE COMMANDER:

Encl

MILTON HUNTER  
Major General, USA  
Director of Military Programs

DISTRIBUTION:

COMMANDER,

U.S.ARMY ENGINEER DIVISION, MISSISSIPPI VALLEY

U.S.ARMY ENGINEER DIVISION, NORTHWESTERN

U.S.ARMY ENGINEER DIVISION, NORTH ATLANTIC

U.S.ARMY ENGINEER DIVISION, GREAT LAKES AND OHIO RIVER

U.S.ARMY ENGINEER DIVISION, PACIFIC OCEAN

U.S.ARMY ENGINEER DIVISION, SOUTH ATLANTIC

U.S.ARMY ENGINEER DIVISION, SOUTHWESTERN

U.S.ARMY ENGINEER DIVISION, SOUTH PACIFIC

U.S.ARMY ENGINEERING AND SUPPORT CENTER, HUNTESVILLE

CECC-C (J. Mahon)

CERE-A (R.Cribbin)

CERM-F (A.Polley)

CEMVD-PM-E (D.Sills)

CENWD-PM-H (D.Tosoni)

CENAD-PP (J. D'Agosta)

CENAN-PP-E (R. Gajder)

CENAP-DP (J.Bartholomeo)

CELRD-OR-DL (D.Spellman)

CELRD-GL-P (R. Warda)

CEMP-RS

SUBJECT: Lowest Reasonable Cost for Superfund Projects Cost-Reimbursement  
Contracts

CENAB-PPE (D.Morrow)

CENAE-PP-M (M.Otis)

CENWD-PM-MP (L.Anderson)

CENWK-EP-E (R.McCollum)

CENWK-MD-H (T.Simmons)

CESPD-PM (J.Davidson)

CESWD-PM-M (T.Hudspeth)

CESWT-PC (J.Wagner)

CESAD-PM-M (S.L.Taylor)

CENWO-MD-HS (J.P.Kirschbaum)

CENWO-MD-HB (G.Herring)

CEMVN-PM-M (L. Pointdexter)

CENWD-HTRW-CX (R.Hines)

CEMP-RS (B. Jemmott)

CEMP-RS (J.Strait)

CEMP-RS (G.Jordan)

CEMP-RS (C.Curington)

CEMP-RS (A.N.Sood)

CEMP-RS (B. Silva)

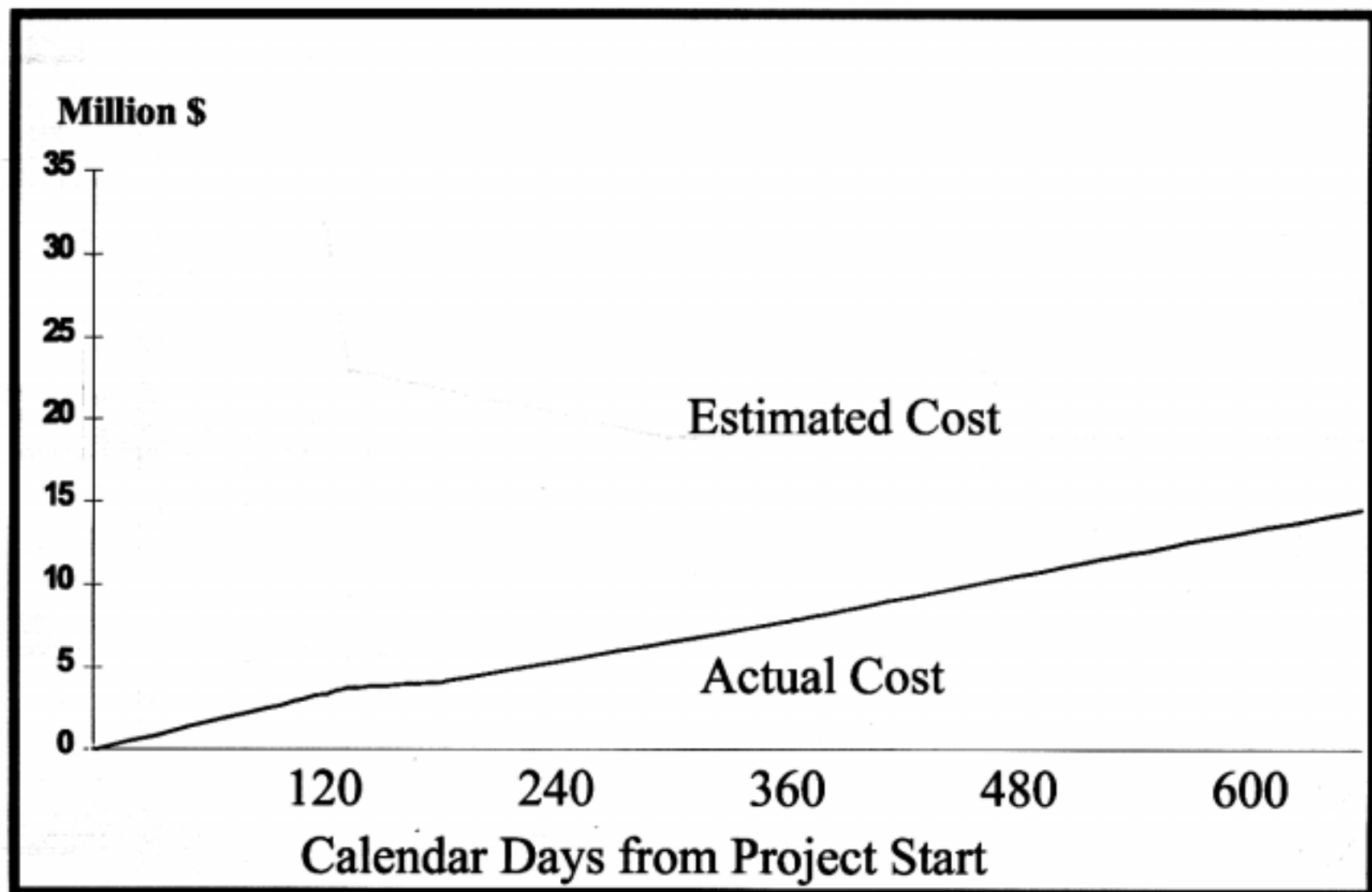
CEMP-RS (R.Cohen)

CEMP-RS (N.Porter)



Referența: 15

# BUNKER HILL SUPERFUND PROJECT ESTIMATED & ACTUAL COSTS VS. TIME



c. "Government Property"

d. "Subcontracts"

e. "Notice of Intent to Disallow Costs"

8. **SUPERFUND PROGRAM CONSTRUCTION MANAGEMENT** - CEMP-CP has developed some critical administration functions necessary to get the job started and maintained on track. The **Lowest Reasonable Cost (LRC)** steps are an initiative introduced by the HQUSACE Superfund Branch. The functions are as follows:

a. Require contractor to:

(1). Prepare the WBS (Work Breakdown Structure) for the entire project scope and total baseline estimate after award.

(2). Schedule the work elements in a Network Analysis System (NAS), subject to approval and subject to direction from the government.

(3). Allocate future costs, as work is accomplished, to the WBS sub-elements in direct relationship to the additional scope and the revised baseline.

b. On a regular basis, determine by the situation, but usually weekly, require the contractor to develop variance reports (in terms of both cost and schedule) that identify:

(1). Potential cost overruns and savings

(2). Potential schedule slippages

(3). Lost time and effort due to delays, accidents, transportation, weather etc.

c. Require the contractor to provide an assessment of the cost and schedule impacts identified by the variance reports and analyze the information using **Lowest Reasonable Cost (LRC) MIS**\*

d. Require the contractor to identify and evaluate alternatives to overcome cost and schedule impacts and recommend the best alternatives using the LRC approach.

e. Discuss the alternative with the contractor and EPA, and reach agreement in a timely manner.

f. Issue proactive, clear, and timely direction to the contractor, while keeping intra- and agency customer(s) fully informed.

**\*Caution!—***This technique, called LRC, which is currently under development, should not be used to provide a promise of a specific price to a customer, but rather it represents a commitment to a management philosophy and technique that seeks to explore as many alternatives as are reasonably available to minimize cost rather than be satisfied at not experiencing a cost overrun.*

This one-time document was developed by the UQUSACE Superfund Branch, (CEMP-RS) Environmental Restoration Division, Military Programs Directorate, Headquarters, U.S. Army Corps of Engineers, 20 Massachusetts Ave. N.W., Washington D.C. 20314-1000. The information contained herein applies only to the HQUSACE Superfund Program and is intended to be an adjunct to available documents and current policy. Please send any comments to the above address or call (202)761-1064 or 4787.



## SUPERFUND POCKET CARD

US Army Corps  
of Engineers •

### Techniques of Effective USACE HTRW Cost-Reimbursement Contract Execution for the Superfund Program

The management of cost-reimbursement projects is different from that of fixed price jobs. Therefore, if you are managing a cost-reimbursement project the same way you did a fixed price job....stop! Consult with a Corps employee with several years experience managing cost-reimbursement projects at the job site and get a second opinion. If you cannot find such a person, call CEMP-RS, at (202)761-1064. The following information is a starting point in developing a check-list of resources and acquiring the necessary mind set minimally required in order to successfully manage the execution of cost-reimbursement contracts.

1. **RISK MANAGEMENT** - Manage the contract risk through proactive leadership during all phases of contract planning and execution. Generally, the lion's share of the risk belongs to the government; accordingly the Corps and the contractor must jointly share the *management* of the work on a *daily basis*. This requires Corps leadership and a staff technically capable of managing ongoing activities much as a project manager for a contractor does in a fixed price contract. This level of leadership and management skills is essential to making sound cost, quality and schedule decisions in partnership with the contractor.

**2. TECHNICAL KNOWLEDGE - Experience/** education resulting in technical knowledge is the underpinning for all management activities and decisions. Cost-reimbursement projects require a staff technically *capable* of managing day to day activities in order to make sound technical decisions in partnership with the contractor. It is the government's on-site representative who is responsible for determining the reasonableness of the contractor's actions from a payment perspective. This knowledge includes but is not limited to, technical direction, customer liaison, cost analysis, cost control, scheduling, managing contractor resources, public involvement, safety and contract administration. If the level of technical capabilities required does not exist, seek help through the team available, including your Division, CEMP-C, CEMP-RS and the PARC.

**3. EFFECTIVE LEADERSHIP - The Corps is** in a key leadership position to ensure that team building, founded on effective communication among all stakeholders - the federal/state customer, contractor, district support elements, and regulators - is achieved in a cost-reimbursement contracting environment. **Build the team early!** The partnering relationships, between the government, which assumes most of the cost/cleanup risk, and the contractor must be business-like and characterized by frequent dialogue. The Corps' leadership in managing risk on behalf of our customer means that the customer expects the Corps' expertise and guidance to be forthcoming when necessary to avoid problems.

**4. COST MANAGEMENT - Because of the** uncertain nature of environmental restoration work, cost-reimbursement contracting techniques are frequently utilized, however the initial baseline cost and schedules are, at best, approximations of the ultimate project cost, and must be managed as such. As new information is obtained in the course of HTRW project execution, work elements and their associated cost and schedules must be continuously reevaluated and updated with the goal of achieving the required cleanup. Pro-actively engage with the contractor to effectively manage the work in order to achieve the **Lowest Reasonable Cost (LRC)\*** while producing a quality product that meets the customer's needs. Require the contractor to capture costs daily, and to provide reports on an as needed basis.

**5. TRAINING - No USACE organization** should engage in cost-reimbursement contracting activities without trained and experienced team members. Appropriate cost-reimbursement training must be initiated promptly when deficiencies in project execution are identified. Experienced support from the Rapid Response, Start-up, and/or Tiger Teams may also be provided.

**6. REWARD - Recognize and reward** successful cost-reimbursement contract performance and initiative by both contractor and government team members, as defined by the Corps and our customers. *Occasional failures* associated with *initiative* and *reasonable* risk taking must also be accepted.

**7. PROJECT MANAGEMENT - Successful**

project management should include early partnering with the construction elements on RFP preparation, source selection, constructibility reviews, solicitation documents and staffing. Besides the lack of training and experience, insufficient staffing and inappropriate disciplines for cost-reimbursement contracts are prominent lessons learned that have been observed at several sites. *Remember*---there is no arbitrary limit on staffing for Superfund projects---negotiate based on the size and complexity of the project! It is critical for the project manager to prepare the district support elements to initiate their respective roles in a timely manner. If you need help, seek help from higher headquarters, including CEMP-RS. Other management issues include:

a. WBS/WAD development,

b. Negotiation of baseline cost and schedule.

Important cost-reimbursement management tools include, but are not limited to the following:

a. Contract management procedures,

b. Government property management,

c. Consent to contractor subcontracting

The following contract clauses take on special significance in cost-reimbursement contracting:

a. "Limitation of Funds"

b. "Allowable Cost and Payment"



***OMAHA DISTRICT PROGRESS REPORT***

***EAGLE-PICHER SITE***

***AUGUST 1998***

***September 10, 1998***

**GENERAL INFORMATION:**

**Site Name:** Eagle-Picher/Bunting Bearing Site, Delta, Ohio  
**IAG Number:** DW96947860-01-0  
**Period of Performance:** April 1, 1998 to December 31, 1999  
**Assignment Title:** TA EE/CA PRP Oversight  
**EPA Site Number:** OH 0001095892  
**EPA RPM:** Matt Ohl

**Scope of Work:** USACE will provide EPA with an evaluation of Engineering Evaluation/Cost Analysis and technical assistance associated with other activities performed by the Potentially Responsible Parties (PRPs) at the Eagle-Picher Site. The detailed Scope of Work is attached to the IAG assignment.

**WORK ACCOMPLISHED THIS PERIOD:**

**August 1998:** Field oversight of PRP activities was accomplished during the period Aug 3 through Aug 19, 1998, for the planned development and installation of MWs, the collection of soil, sediment and surface water samples.

MWs were not installed, as planned, due to the depth to ground water and the clay substratum. Drilling to install MWs was attempted at three planned locations up to a depth of seventy five (75) feet without encountering ground water. Therefore, the effort to install MWs was terminated.

Subsoil investigation with drill rig and geoprobe located and defined a small area and volume of foundry sand. The anticipated large pit of foundry sand was not encountered.

Adjustments were made in the collection of site samples, as specified in the Site Sampling Plan, based on preliminary sample analysis. Planned sample collection in the northeast corner of the site was reduced and sample collection along the southern perimeter was increased. Also additional sediment samples along Fewless Creek was increased.

Project labor was \$8,937.35 as documented in the attached bill dated Sep 2, 1998.

**USACE PERSONNEL CHARGING LABOR:** See attached bill.

**PUBLIC/GOVERNMENT CONTACTS THIS PERIOD:** None.

**PROJECT ISSUES and CONCERNS:** The high contamination levels of lead, copper and zinc in the sediment samples of Fewless Creek require additional sampling and analysis to determine the extent of these metals contamination. The extent of contamination should define the width, depth and down stream limits of action levels. These issues were identified in last months report and continue to be a concern.

**KEY PERSONNEL CHANGES:** None.

**STATEMENT OF CHARGES FOR THE PERIOD:**

<b>Total Funds Authorized</b>	<b>\$265,000.00</b>
Funds Expended During Report Period	\$ 11,544.09
Total Billed to Date	\$ 35,255.60
Sum of Obligations and Commitments	\$ 35,255.60
<b>Balance</b>	<b>\$229,744.40</b>

**SCHEDULE:**

**Current Completion Date:** December 31, 1999.

**Projected Work for Next Period:**

Submit Field Summary Report and develop Data Evaluation Report when data becomes available from the PRP and our laboratory.

Enclosure

Fred L. Henry  
Technical Manager, Section B  
Environmental Remediation Branch  
Engineering Division

Copy Furnished (w/encl):  
CENWO-PM-H (Herring)



DEPARTMENT OF THE ARMY  
U.S. Army Corps of Engineers  
WASHINGTON, D.C. 20314-1000

REPLY TO  
ATTENTION OF:

07 JAN 1999

CEMP-RS (200-1a)

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Implementation of the Program and Project Management Information System (PROMIS) for Environmental Programs

1. References:

a. Memorandum, CEDC dated 28 February 1997, subject: PROMIS Implementation Guidance Memorandum Number 1.

b. Memorandum, CEMP-M dated 28 April 1997, subject: PROMIS Implementation Guidance Memorandum Number 2.

c. E-mail message, CEDC dated 29 April 1998, subject: PROMIS.

2. Headquarters, U.S. Army Corps of Engineers (HQUSACE) formed a Program and Project Management (PM) Tiger Team to research, develop a Course of Action analysis and decision brief for Automated Information System(s) AIS(s) to support the USACE PM process. The PM Tiger Team recently recommended and the Chief of Engineers concurred that PROMIS will be the PM AIS.

3. The enclosure provides instructions to enter and maintain environmental projects in PROMIS.

4. The point of contact for this action is Mr. Jim Strait (202) 761-0414, fax (202) 761-0525.

FOR THE COMMANDER:

Encl

  
MILTON HUNTER

Major General, USA  
Director of Military Programs

DISTRIBUTION:  
COMMANDER,

U.S. ARMY ENGINEER DIVISION, MISSISSIPPI VALLEY  
U.S. ARMY ENGINEER DIVISION, NORTH ATLANTIC

Reference 1c

## **Instructions for Entering and Maintaining Environmental Projects in the Program and Project Management Information System (PROMIS)**

1. **General.** All work managed by USACE will be entered and maintained in PROMIS with appropriate links to the Corps of Engineers Financial Management System (CEFMS). Specific guidance for PROMIS implementation is provided below for each of the major Environmental programs. Each district executing any portion of a project where other portions are executed by another district must manage their portion separately in their district's PROMIS database. This is necessary because PROMIS, like CEFMS, is a District level system and information is not exchanged corporately between district systems. Districts are encouraged to develop customized WBS templates and virtual projects that can be quickly retrieved and edited for specific project requirements resulting in shorter loading time.

CENWD has initiated an Internet based PROMIS, CEFMS and RMS reports application at URL - <http://wpc21.usace.army.mil:9713/>. Districts, Divisions, and HQUSACE can access this application for project and program reports. The reports application is maintained by Robert E. Taylor, CENWP, 503-808-4977, and Karen L. Morgan, CENWS, 206-764-6086. They can be contacted regarding report specifications currently available and for creating additional reports. The following conventions for entering project narrative information in PROMIS comment fields will allow for consistent retrieval of that information for reports: project background and scope will be entered as a Synopsis comment; project status will be entered as a General comment; and, project issues will be entered as Issue comments.

2. **Lowest Reasonable Cost Line Charts.** Environmental Division requires that project cost estimates as well as actual costs be tracked over time with the goal of reducing project costs. Total Estimated Project Cost Estimates and Actual Project Cost verses time are graphically depicted as lines over the life of the project. Various graphical approaches may be used. One suggestion shown on enclosure 1 is for the Southern Maryland Wood Treating project. The initial total estimated project cost was created at the beginning of the project. The negotiated total project cost estimate was subsequently prepared that saved \$17M of the initial \$47M cost estimate and saved 145 days of the initial 945 days. The negotiated project costs are now \$30M and time to complete is now 800 days. Actual project costs are also plotted so management can compare to the projected costs and make appropriate adjustments. The lowest reasonable cost line charts are to be prepared by the executing district in PowerPoint or Excel and submitted to HQ semi-annually via e-mail.

3. **Intergovernmental and Superfund Support Projects.** Intergovernmental and Superfund programs define a project in PROMIS as an operable unit where one or more phases (i.e. remedial investigation/feasibility study, remedial design, remedial action, real estate, etc) are executed for the same scope of work. Each phase is required to be resourced to the third level of the Hazardous, Toxic and Radioactive Waste (HTRW) Work Breakdown Structure (WBS). Enclosure 2 provides a diagram of the PROMIS HTRW WBS elements and CEFMS HTRW Work Category Elements with appropriate links at the third level. Project Managers may



resource at lower levels if desired. Minimum Milestones include Start RI, Final RI submitted, Start FS, Final FS report completed, Design started, Pre-final (90%) design submittal, Advertise (IFB) or issue RFP for RA, Award RA (Construction contract), RA NTP Issued, RA physically complete, RA contract complete, Start Real Estate Planning Report (REPR), Complete REPR, Start RE Acquisition for RD, Complete RE Acquisition for RD, Start RE acquisition for RA, and Complete RE Acquisition for RA.

**4. Installation Restoration Program (IRP) Projects.** Enclosure 3 provides detailed guidance for entering IRP into PROMIS.

**5. Army Base Realignment and Closure (BRAC) Environmental Restoration (ER) Projects.** Enclosure 4 provides detailed guidance for entering BRAC-ER projects into PROMIS.

**6. The Formerly Used Defense Sites (FUDS) Projects.** Enclosure 5 provides detailed guidance for entering FUDS projects into PROMIS.

**7. Formerly Utilized Sites Remedial Action Program (FUSRAP).** Detailed guidance for entering FUSRAP projects in PROMIS is provided in Enclosure 6.

## **Five Year Reviews**

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- Purpose and Objective
- Discuss Site Visits
- Discuss Lessons Learned

## **Five Year Reviews**

---

- Purpose: To ensure that the response action remains protective of human health and the environment.

## **Five Year Reviews**

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- Helen Kramer SF Site:
  - Site Visit in June 1998
  - Report Completed in August 1998
  - Cost: Approximately \$20,000.
- Site Description.
- Recommendations for the site have potential savings of over \$300 k/yr.

## **Five Year Reviews**

---

- "Cap Checks" at Heleva, Lackawanna and Moyer SF Sites in August 1998.
  - Not a full 5-yr review.
  - Cost: About \$25,000 for all three sites.
  - Good field test of "checklists."
- Site Descriptions.

## Five Year Reviews

---

- Mid-State Disposal Superfund Site
  - Site Visit completed in October 1998, Draft report submitted to Region V in December.
  - Cost: About \$30,000.
  - Gave good feel for level of effort and experience needed for review.
- Site Description.

## Five Year Reviews

---

- Lessons Learned to Date:
  - Adequate Review of RI/FS, ROD, Design Documents, As-Built Drawings, O&M data, etc. is critical.
  - Review team should consist primarily of design oriented personnel, along with O&M personnel, State, Local & Federal officials.

## **Five Year Reviews**

---

### **■ Lessons Learned to Date:**

- Have site "ready" for an inspection, and be "ready" for the site inspection.
- Recommend documenting findings by use of reports, drawings, and photographs.

## **Five Year Reviews**

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### **■ Latest Developments**

- Sample Scope of Work
- Updated Checklist

## **Appendix 5 - USACE Intergovernmental and Superfund Support Branch (CEMP-RS) Contact Information**

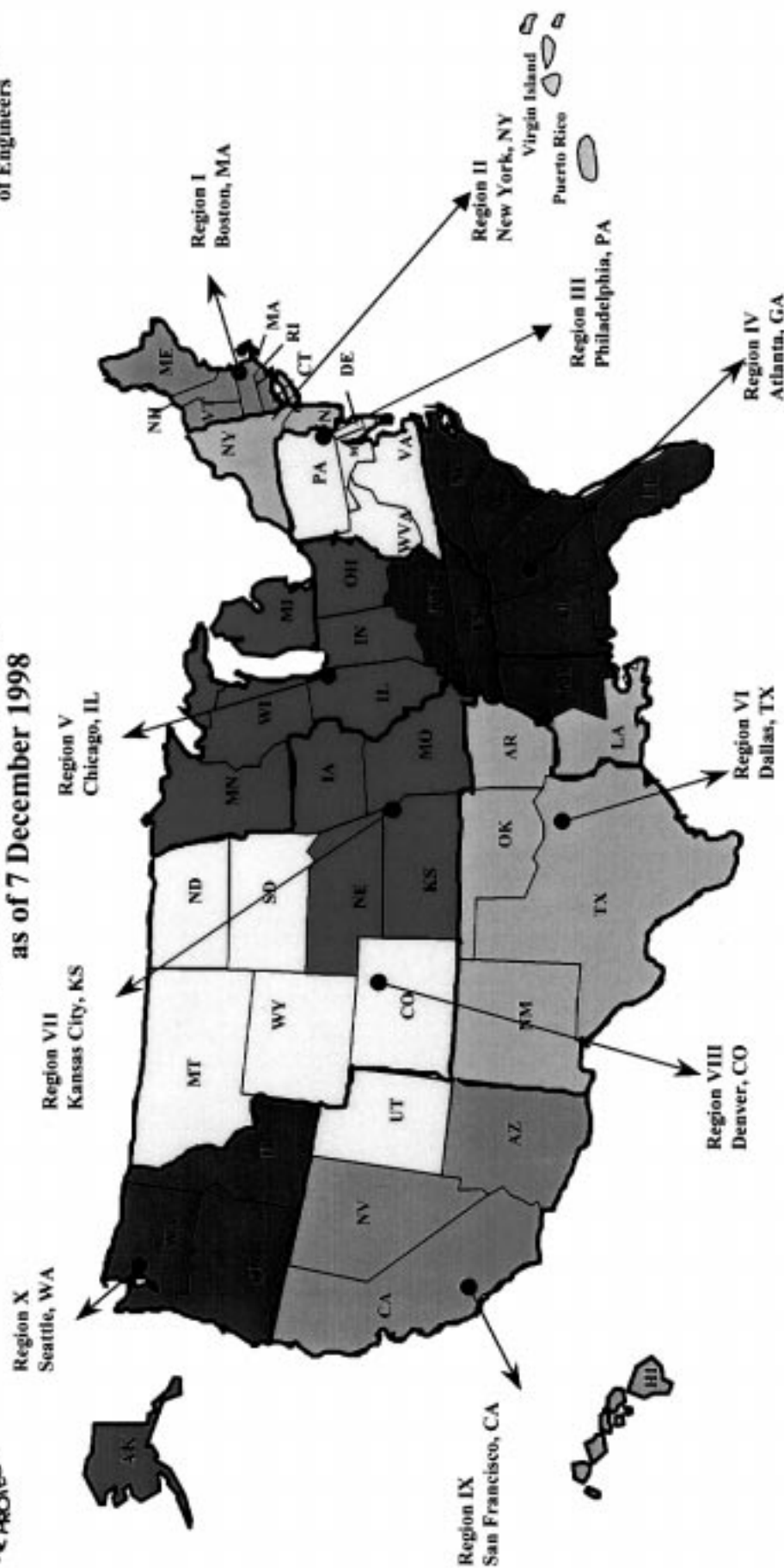


# U.S. EPA SUPERFUND PROGRAM U.S. ARMY CORPS OF ENGINEERS Intergovernmental And Superfund Support Branch (CEMP-RS)

EPA Regional Assignment  
as of 7 December 1998



U.S. Army Corps  
of Engineers



CEMP-RS Lead POC	EPA Regions	OFC Telephone	Alternate	OFC Telephone
Nash Sood	I, IX	(202) 761-8618	Cal Curington	(202) 761-1064
Cal Curington	II, VI	(202) 761-1064	Cal Curington	(202) 761-1064
Rhea Cohen	III, VIII	(202) 761-7584	Nash Sood	(202) 761-8618
Calvin Curington	IV, X	(202) 761-1064	Rhea Cohen	(202) 761-7584
Cal Curington	V, VII	(202) 761-1064	Nash Sood	(202) 761-8618

Assistants  
Nancy Porter

FAX: (202) 761-0525

EPA Regional Accelerated Response Centers

- Regions I & IX Murray Newton, Director (703) 603-8795
- Regions II & VI Betsy Shaw, Director (703) 603-9034
- Regions III & VIII Thomas Sheekells, Director (703) 603-8916
- Regions IV & X John Cunningham, Director (703) 603-8708
- Regions V & VII Paul Nadeau, Director (703) 603-8974



U.S. Army Corps  
of Engineers

U. S. Army Corps of Engineers  
Intergov. and Superfund Spt. Br.(CEMP-RS)  
**SUPERFUND DIRECTORY**

<b>EPA Region</b>	<b>Div Coordinator</b>	<b>Telephone No.</b>	<b>HQUSACE</b>
<b>Served/ EPA POC</b>	<b>Office Symbol</b>	<b>Fax No.</b>	<b>Program Mgr. Telephone No.</b>
1/ Mr. Mike McGagh (617) 223-5534  (617) 573-9662	<b>Joe D'Agosta (M-North Atlantic)</b> Superfund Program Mgr CENAD-PP-M  Mark Otis (New England Dist./D,A) CENAE-PD-E (MA,CT,RI,VT,NH,ME)	(718) 491-8773 (718) 491-8872  (978) 318-8895 (978) 318-8891	Nash Sood (202) 761-8618 (202) 761-0525
2 /Mr. Shaheer Alvi  (212) 637-4324 (212) 637-4360  Mr. Michael Scarano (718) 491-8763 Business Mgr. (212) 637-4449	<b>Joe D'Agosta (M-North Atlantic)</b> Superfund Program Mgr. CENAD-PP-M Lya Theodoratos (M) CENAD-PP-M  Rich Gajdek (New York Dist./A) CENAN-PP-E (NY, NJ) Bart Bartholomeo (Philadelphia Dist./A) CENAP-PP (NJ) Jim Boone (Jacksonville Dist./A) CESAJ-DP-S (Puerto Rico) Susan Lewis (Baltimore Dist./D,A) CENAB-RE-c (NJ, PA, MD, VA, WV) Mark Otis (New England Dist./D) CENAE-PD-E (NY) Tom Simmons (Kansas City Dist./D) CENWK-PM-E (NY, NJ)	(718) 491-8773 (718) 491-8872 (212) 264-5490 (212) 264-5189  (212) 264-0137 (212) 264-1671 (215) 814-6927 (215) 814-6699 (904) 232-2583 (904) 232-3920 (410) 962-4921 (410) 962-0866 (978) 318-8895 (978) 318-8891 (816) 983-3372 (816) 426-5509	Cal Curington (202) 761-1064 (202) 761-0525
3/ Mr. Walt Graham  (215) 566-3146 (215) 566-3001	<b>Joe D' Agosta (M-North Atlantic)</b> Superfund Program Mgr. CENAD-PP-M  Bart Bartholomeo (Philadelphia Dist./A) CENAP-PP (One door to Corps) Jared Olsen (Baltimore Dist./D,A) CENAB-PP-E (PA, MD, VA, WV)	(718) 491-8773 (718) 491-8872  (215) 656-6927 (215) 656-6699 (410) 962-4454 (410) 962-9312	Rhea Cohen (202) 761-7584 (202) 761-0525

M) Major Subordinate Commands  
Responsibility Area

D=Remedial Design, A= Remedial Action

[illegible]

(M) Major Subordinate Command, R=Remedial Design, A= Remedial Action  
Responsibility Area

EPA Region Served/ EPA POC	Div. Coordinator Office Symbol	Telephone No. Fax No.	HQUSACE Program Mgr.
	Roger Vogler (Detroit District/A) CELRE-CO-C (MI)	(313) 226-6818 (313) 226-3519	
	Rick Meadows (Huntington District/A) CELRH-DL-M(OH)	(304) 529-5388 (304) 529-5715	
	Carolyn Deane (Louisville District/D,A) CELRL-DL-C (IN)	(502) 625-7188 (502) 625-7188	
	John Hall (Nashville District/D) CELRN-ER-M (IN)	(615) 736-5966 (615) 736-7676	
	Craig Evans (St. Paul District/A) CEMVP-PE-M (MN & WI)	(612) 290-5594 (612) 290-5590	
	Greg Herring (Omaha Dist./D,A) CENWO-PM-HS (IL,IN,MI,WI,MN)	(402) 221-7712 (402) 221-7838	
6/ Mr. Carl Edlund (214) 665-8126 (214) 665-6660	David Sills (M-Vicksburg) CEMVD-PM-E Tom Hudspeth (M-Dallas) CESWD-PM John Davidson (M-South Pacific) CESPD-PM-M  John Wagner (Tulsa Dist. /D,A) CESWT-PC(OK,TX,AR,LA) Larry Poindexter (New Orleans Dist./A) CEMVN-PM-M (LA)	(601) 634-5026 (601) 634-5477 (214) 767-2177 (214) 767-2586 (415) 977-8245 (415) 977-8256  (918) 669-7239 (918) 669-7206 (504) 862-2937 (504) 862-1785	Cal Curington (202) 761-1064 (202) 761-0525
7 /Mr. Gene Gunn (913) 551-7776 (913) 551-7063	Larry Anderson (M-Portland) CENWD-PM-MP Rick Wilson (M- Omaha) CENWD-MP-PM-H  Tom Simmons (Kansas City Dist/D,A) CENWK-PM-E (KS,MO,IA,NE)	(503) 808-3744 (503) 808-3749 (402)-697-2525 (402) 697-2503  (816) 983-3372 (816) 983-5509	Cal Curington (202) 761-1064 Nancy Porter (202) 761-5245

(M) Major Subordinate Command, D=Remedial Design, A=Remedial Action  
Responsibility Area

EPA Region Served / EPA POC	Div. Coordinator Office Symbol	Telephone No. Fax No.	HQUSACE Program Mgr.
8/ Mr. Dale Vodehnal (303) 312-6761	<b>Larry Anderson (M-Portland)</b> CENWD-PM-MP Rick Wilson ( <i>M-Omaha</i> ) CENWD-MR-PM-H  Larry Woscyna (Omaha Dist/D,A) CENWO-PM-H (CO,UT,WY,SD,ND) Greg Herring (Omaha Dist./D,A) CENWO-PM-HS (CO,UT,WY,SD)	(503) 808-3744 (503) 808-3749 (402) 697-2525 (402) 697-2503  (402) 221-7715 (402) 221-7838 (402) 221-7712 (402) 221-7838	Rhea Cohen (202) 761-7584 (202) 761-0525
9 / Mr. David Seter (415) 744-2400	<b>John Davidson (M- South Pacific)</b> CESPD-PM-M Ahsan Syed ( <i>M-South Pacific</i> ) CESPD-ET-C	(415) 977-8245 (415) 977-8256 (415) 977-8036 (415) 977-8256	Nash Sood (202) 761-8618 (202) 761-0525
10 /Mr. Mike Gearheard (206) 553-7151	<b>Larry Anderson (M- Portland)</b> CENWD-PM-MP Mark Ohlstrom (Seattle Dist./D,A) Genny Dierich CENWS-PM-HW (WA,ID,OR)	(503) 808-3744 (503) 808-3749 (206) 764-3457 (206) 764-3265 (206) 764-6795	Cal Curington (202) 761-1064 (202) 761-0525
<b>Rapid response program</b>			
Mr. John Kirschbaum (Omaha District-Rapid) CEMVO-PM-H (Nation wide *)		(402) 221-7714	(402) 221-7838
<b>HTRW center of expertise, Omaha, HTRW-CX</b>			
Mr. Rick Hines / IAG Technical Manager		(402) 697-2624	(402) 697-2613
Mr. Marvene Seaman / Financial Manager (Nation wide*)		(402) 697-2425	(402) 697-2613

(M) Major Subordinate Command, D=Remedial Design, A=Remedial Action  
Responsibility Area , \* US Borders and beyond

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Jim Strait (202) 761-0414

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6 Jan 1999

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\*\* Please call with changes  
corrections, & recommendations